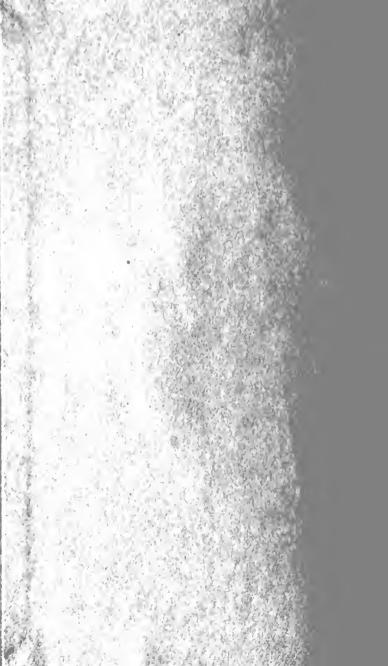
NYPL RESEARCH LIBRARIES
3 3433 07868307 9



3-000E





Digitized by the Internet Archive in 2008 with funding from Microsoft Corporation

## **HOW TO BUY**

# **FURNITURE**

## FOR THE HOME

FORREST LOMAN OILAR

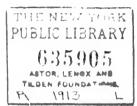
PUBLISHED BY
OILAR BROTHERS
INDIANAPOLIS

32

#### COPYRIGHT, 1913

BY

#### FORREST LOMAN OILAR





THE HOLLENBECK PRESS
INDIANAPOLIS

DEDICATED

то тне

FOUNDATION OF A PROGRESSIVE NATION

THE HOME

## MEWY YORK DIJEUN MEWYARKY

#### PROEM

Furniture is one of the chief requisites in our lives, promoting, as it does, health and happiness. Few have wealth, but all must have a home. Do we realize what a factor the furnishing of a home is, in the scheme of modern civilization? We have as much a duty in educating the home-maker in the selection of furniture as in preaching civic beauty. To create harmony in a home is to raise the average of culture and intelligence.

The home life is influenced by its furnishing, and in the home the nation is moulded.

Without pleasant surroundings the child will seek outside amusements, thence the street corners and the attractive and well-furnished saloons. If one desires a well-furnished house, one should make house furnishing a study. Homes are brought up to the standard in ratio to the study which is put upon them, it being impossible to build higher than one's ideals.

The writer has been associated with the home-furnishing business all of his business life, from clerk to buyer, and then manager of one of the largest concerns in house-furnishings. He has kept in touch with the furniture markets by visiting them semi-annually for many years, as well as familiarizing himself daily with the demands and needs of the consumer, and has been closely affiliated with the State and National Furniture Association work. Such intimate, in-

side connection with the house-furnishing business has convinced the writer that the average purchaser lacks so much in preparation and experience that he is prone to make purchases which are not, in the long run, satisfactory. He falls an easy prey to the unscrupulous dealer and incompetent clerk. He also fails to consider that house furnishings are things with which he lives every day, that they should be selected with critical care, and chosen so that they may become dearer with each year's association, and of a quality to be handed from generation to generation with increasing pride and love.

Thousands of people each year are duped into buying poorly constructed, unattractive and unserviceable home furnishings, and not until they experience their second or third purchasing trip do they learn to economize by buying quality goods.

There are many books on the market which give a great deal of information about certain essentials in furnishing the home, but there seems to be lacking, in most of these works, the specific directions which one needs in selecting the furnishings which have the combined qualities of attractiveness and service. Many books relative to period furniture may be had, and though period furniture is growing rapidly in demand, the average layman does not care so much about the style of furniture which was used centeries ago, and little does he consider the value of modern furniture. Numerous manufacturers of various kinds of commodities place practical and instructive matter in the hands

of those inquiring, but that matter, as instructive as it usually is, naturally favors the particular line designated.

There are just as many points to be considered and looked for in buying an inexpensive rocking chair as in selecting a period suite which must carry with it carvings and other lines which were in vogue at the time of its conception.

Lack of knowledge in selecting home furnishings is false economy. A poor selection usually results, in time, in a better and wiser purchase, and a knowledge of how to select carefully and wisely at first will prove a great saving.

People of today live too fast and usually do not take time enough in studying and selecting furnishings for their house—furnishings that must last perhaps a lifetime. Owing to the carelessness of some purchasers, complete outfits have been sold in a very few minutes. It takes *time* to go through a large stock and make comparisons and the best selections. If time is limited, it is policy to wait until one can use the required time for this very important work.

The purpose of this book, therefore, is to qualify the house furnisher to discriminate between worth-themoney goods and shoddy or poorly constructed articles, which are calculated to deceive the novice; to make him an independent judge of qualities; to tell why and how; to place the experience of years at his command and enable him, while freely exercising his individual taste, to buy knowingly and make the spending of his house furnishing appropriation yield an asset instead of an expense.

For courtesies shown in supplying special information which has helped to make this book more practical, grateful indebtedness is due to the following manufacturers, trade journals, and periodicals: Heywood Brothers and Wakefield Co., Chas. P. Limbert Co., Stickley Bros. Co., Gustave Stickley, Simmons Manufacturing Co., Kimball and Chappell Co., Karpen Bros., Century Furniture Co., Grand Rapids Furniture Record, Carpet and Upholstery Trade Review, Furniture Retailer and House Furnisher, and Veneers.

THE AUTHOR.

CHAPTER I Education is important. A little advice to beginners. To buy wisely is to buy economically. Production and distribution. The middleman "The Distributor". A word about the cost of furniture-making. Furniture profits are not enormous. Patronize reputable dealers. American-made furniture is universal. Home buying versus mail-order buying. Freight, damages, etc. Think twice before buying on the installment plan. A kindly word of warning. Trading stamp, premium and gift schemes. Dishonest buyers harm honest buyers and honest merchants. Eliminating and discriminating. Leaders or specials. Terms should be a secondary consideration. Better to buy where acquainted. CHAPTER II Printed imitation called "American oak". How to detect it. Plain oak. Veneered versus solid woods. ......... 28 GLUE ... Effect of Dry Air on Furniture.... 28

CHAPTER III	D
RATTAN, REED, WILLOW, FIBRE, RUSH FURNITURE	Page
CHAPTER IV	
LEATHERS  Currying and buffing. The treatment of splits. The reproduction of effects. How leather is "boarded". Spanish leather. How modern Moroeco is made. Cordovan and Russian leather. Leather will crack. Imitation leathers.	. 32
FURNITURE COVERINGS	. 42
CHAPTER V	
Period Furniture  Study kindles desire. English furniture predominates. Chronological arrangement of period furn ture. Classic period. Gothic period. Fifteenth Century Renaissance. Elizabethan, Jacobean, and Tudor periods. Elizabethan. Jacobean. Cromwellian. Queen Anne period. Chippendale period. Hepplewhite period. Adam period.	. 43 i-
Sheraton period. Louis XIV period. Louis XV period. Louis XV period. Louis XVI period.	
First Empire period. Colonial period. Post Colonial period. L'Art Nouveau.	
Modern mission style.	

xi

#### CHAPTER VI Page Kitchen ..... ... 64 Stoves and ranges. Directions for setting up stoves and ranges. Directions for operating. Base burners. Electric cookers. Gas stoves Kitchen cabinet. A practical suggestion. Kitchen stools. Kitchen tables. Refrigerators. Care of a refrigerator. Window refrigerators. Fireless cookers. CHAPTER VII Modern finishes. Dining table. Table pads. Buffets and china closets. Dishes. Dining chairs. Chair glides. CHAPTER VIII Davenports. Sanitary couches. Couches. Living-room tables. Straight chairs. Arts and crafts construction CHAPTER IX Bedroom ...... 97 Modern finishes. Dressers, etc. Bedroom desks.

Bedroom—Continued.	73
Dressing tables.	Page
Cheval mirrors,	
Bedroom chairs.	
Plate glass tops.	
Casters.	
Locks.	
Beds.	
Brass finishes.	
Brass beds.	
Lacquers.	
Clothes trees.	
A brass cleanser.	
Wood, poster and bungalow beds.	
Twin beds.	
Bed springs.	
Box mattresses.	
Mattresses.	
Inferior mattresses.	
Silk floss mattresses.	
Hair mattresses.	
Proper care of mattresses.	
Pillows.	
Cedar chests.	
The auto valet.	
CHAPTER X	
I von total	
	115
Modern finishes.	
Library chairs and rockers.	
Library couches.	
Library tables. Bookcases.	
Dookcases.	
<b>6</b> . <b>6</b>	
CHAPTER XI	
PARLOR	120
HALL	120
Den	121
	121
CHAPTER XII	
C -	
Sewing Room	123
Sewing machine.	
Needles.	

CONTENTS	xiii
CHAPTER XIII	Page
Porches	
Sun parlor. Mission porch furniture. Summer furniture. Sleeping porch.	
CHAPTER XIV	
VACUUM CLEANER  Hand power cleaners.  Electric power cleaners.  Water power cleaners.  Avoid unresponsible representatives.	130
CARPET SWEEPERS	132
CHAPTER XV	
Home Building Pointers  Do Not Invite Poor Service  Take all measurements.  Prepare a list.  Examples of lists with prices.	
CHAPTER XVI	•
Carpets and Rugs	lvets. etings.

	CHAFTER XVII	
		Page
Linoi	LEUMS	. 157
	Different grades Seconds.	
	Linoleum preservation.	
	Computing yardage.	
	Waste and avoiding seams.	
	Care of linoleum.	
	CHAPTER XVIII	
Wind	ow Shades	. 161
	How to detect quality goods.	
	Shade rollers.	
	Care of window shades.	
	Measuring shades.	
	Shade price list.	
	CHAPTER XIX	
ORIEN	NTAL RUGS	. 167
	Classifications.	
	Pleasure resort purchases.	
	Auction sales.	
	A few distinguishing marks.	
	Consult an expert.	
	CHAPTER XX	
FIRE	Insurance	. 172
	Insurance on leased goods.	
	Understand your policy.	
	Important clauses.	
	Standard policy.	
	Some facts about your insurance policy.	170
LEASI	ES	. 178

## HOW TO BUY FURNITURE FOR THE HOME

#### CHAPTER I

In considering that the cost of living is now an all important topic for discussion, it is most essential that everybody, especially the younger people, be advised in a degree, at least, as to how, where, and what to buy in the furnishing of their homes.

Commodities, on an average, are today little, if any higher priced than years ago, but the public demands better things and when an analysis is taken, it will be found that the high cost of living is not so much a matter of the great increase in prices as it is a growing demand for the best; not a question of the high cost of living, but as some one has said "The cost of high living."

When any article is purchased nowadays it is usually found that the quantity received is much less than in previous years, but an attractive transformation will be noticed in that the article is encased in an elaborate carton, or wrapped in tissue paper and perhaps bound in ribbon; all of these things are summed up and called "Service."

Education Is Important-Education, therefore,

seems as indispensable when it comes to the important matter of furnishing a place where one expects to spend, perhaps, the rest of one's life, as it is along any other channel. The matter of educating the public in the economical buving of furniture, that is, to use better and more serviceable furniture, has been sadly neglected. It has been stated that the annual expenditure for furniture in the entire country at the present time amounts to only one dollar and fifty cents per capita, while the amount spent for cigars, tobacco, and coco-cola is something like eight times that amount. Whether this be true or not, the indications are that the furnishing of the home, so far, has not entered into the high cost of living; instead, the money that should go into the home is spent for things that appeal to and attract the pleasure loving.

A Little Advice to Beginners—But very little has been offered in really good all-around advice to beginners as to how to go about the furnishing of their new home, and yet there is nothing in the whole curriculum of commodities of which there is as little known as the buying of household furniture. The reason is easily seen, for if a girl has been properly trained, she has, by the time she reaches a marriageable age, become somewhat proficient in cooking and sewing, in the selection of her clothes, in the management of a home, but she knows least of all relative to the furnishing of the same, while the young man knows much less. His time has been occupied in gaining his education, or if a laborer or a tradesman, his schooling

and his work have occupied his time. At the time of their marriage the furnishing of a home enters abruptly but surely into their life and they together are compelled to figure out something entirely new and foreign and in most cases without the aid of even having previously visited a furniture establishment.

To Buy Wisely Is to Buy Economically.—Young people would be better pleased with their purchases if they would make their own selection, but they are sometimes inflenced by their friends or relatives against buying what they wish. Many a couple, when starting to furnish their home, has made the huge mistake of buying a quantity of the cheapest goods they could find, with the idea of purchasing a better grade later. After a few years of wear and tear they find that it would have been economy to have purchased goods of quality rather than quantity. "More quality and less quantity," therefore, should be the slogan of every purchaser.

Quality, it must be understood, should be considered in all phases. Quality of material, quality of workmanship, quality of design, quality of finish and appearance.

Production and Distribution—The great problem of trade consists fundamentally in the process of production and distribution. While these activities must be co-existent, the great commercial problem is more that of distributing than that of producing, because production is governed by the demand, or distribution. A moment's reflection will reveal the fact that the sell-

ing or distributing forces are perhaps the greatest activities in the world to-day, as every man, regardless of his profession, has something in one form or another to sell.

The Middleman "the Distributor"—The distribution of commodities in most cases is ultimately the work of a retail shop, sometimes called the "middleman." The retailer is to the home what the architect is to the building; the decorator to the interior of the home. If one will consider the quantity of goods that a single manufacturer puts out, and that this same manufacturer makes hundreds and possibly thousands of a single pattern, and that probably only a very few pieces of each design go into a community, one will appreciate more fully the value of the middleman. Through him we are able to obtain an article at the same low price as does the person who lives in a large city where hundreds of the same design are sold. Imagine the inconvenience and dissatisfaction of one having to communicate with the manufacturer for each article needed in the home. The fact that there is an army of merchants makes it possible for a manufacturer to offer an article at the minimum cost. To fill these demands enables him to make hundreds of duplicates rather than six or a dozen. It must be understood that the first article of a given kind sometimes costs hundreds of dollars, but just as soon as this article is made in quantities, the cost lowers in proportion, which gives a reduced price to the consumer.

A Word About the Cost of Furniture Making-One

not engaged in the manufacturing business little appreciates the value of cost making. Is it merely some one's idea that a certain article is to bring a certain retail price and that that theoretical price is simply attached, or is there something with a more fixed basis that determines the cost of an article? There must be so there is. What is the worth of a large oak in a forest? One may buy it for a trifle, perhaps turn it into a household piece of furniture. That thought may lead one to believe that one's furniture will cost but very little: however, it would be found that by the time the tree is converted into furniture the investment will be ten or twenty times the price of the tree, and in the end one will have an article much smaller than the original oak. The real cost of furniture is not the wood that is in it, but the labor and service rendered during its transformation from a tree in the forest to a piece of beautiful furniture in a home. The cost of services and labor can be determined to one's satisfaction by purchasing an old piece of furniture or an antiquity, and having it refinished. Rare specimens of antique furniture have been purchased at a low figure, but when refinished and put into first-class shape it was found that the cost was greater than a new reproduction is worth and not as good, since the workmanship of the high grade manufacturers of today usually surpasses that of the past.

It is a difficult matter to ascertain the real monetary value of an article. Some claim to do so, but in truth no one knows the cost of an article except the manufacturer. Thousands of manufacturers have failed in business, owing to the incorrect estimates of the cost of production, and in consequence, selling the article at little or no profit. An article of good merit and construction was placed where experienced buyers from all over the country assembled, who were asked to name a price on the piece. Their guesses varied from ten to fifty dollars. If the educated buyer makes such widely varied answers, how could it be expected of the laymen to know the value of an article? In most instances the shopper is not really satisfied in his own mind, simply because he does not know values when he sees them, but often buys to suit his pocketbook, thus sacrificing quality and trusting to luck for the service, which sometimes proves unsatisfactory.

Furniture Profits Are Not Enormous—Some people entertain the erroneous idea that the profit on furniture is something enormous. This idea must be formed because the first outlay seems to be large. Would not the same profit rule apply to real estate or the house in which one lives? Figure the grocery bills for ten years only and see how that will compare with a bill of furniture that is bought once in a life time, if chosen with knowledge.

The public in general does not realize that the furniture business is a very difficult business to conduct properly and profitably. This difficulty is due to the spacious display rooms required and the large force of employes needed to conduct the sale of the goods, handling, unpacking, cleaning, etc. Patronize Reputable Dealers—But few people know how to select goods advantageously, and if compelled to buy in large cities should be more cautious than in the smaller towns. In the cities some stores can thrive on the trade which comes into the store but once. They never expect to see their customers again and consequently are indifferent as to the quality of the goods they sell them. Therefore, those who live in a city should go to a reputable dealer where it is known that the quality of goods and the prices are right.

There is not a reputable house that cares to sell anything except quality goods, as such goods are an everlasting advertising asset. This does not necessarily mean that quality goods are free from defects. Instances occur where glue joints fail to hold or the silvering on backs of mirrors checks or peels. Some unpreventable thing may happen to the very best grade of furniture.

It should be remembered that the furniture dealer is merely an agent through whom goods are introduced. He should not be obliged to repair furniture free of charges after delivered and received in good order, any more than should a plumber be expected to keep a plumbing job up after it has been accepted. If an article that is purchased does not give as good service as it should, the merchant or agent should be notified and he will be only too glad to refer the matter to the factory or maker of the article, who, as a rule, will make satisfactory adjustment through their agent. Almost all manufacturers stand back of their own

goods. Your interests, therefore, are protected by any reliable merchant.

American Made Furniture Is Universal—It is to one's advantage to buy goods at home. Don't be like the lady who went to Europe and brought home with her a beautiful chair. The man hired to unpack it carclessly knocked it against a door, thus mutilating some of the carving, and under that carving was the bold trade mark of an American manufacturer. This is but one of thousands of cases where American made goods are purchased abroad.

Home Buying Versus Mail Order Buying-It is usually more satisfactory to buy furniture from sample than to select from pictures or a catalogue. The mail order houses are numerous these days and the unsophisticated are liable to be led astray by attractive or overdrawn pictures and nicely worded advertisements which sometimes represent the goods to be better than they really are. Mail order houses seldom get the branded advertised lines of goods and seldom get the best class of trade, because conservative buyers go where they can see the article they want. If one is not interested enough in what is being bought to see the goods before purchasing, and can pay cash in advance, and can wait for the arrival of the goods, one can eliminate a part of the cost of service for which a dealer, carrying a large assortment to choose from, must be paid.

In buying a household outfit from a mail order house it seldom occurs that the goods are in stock, consequently the goods are shipped from various parts of the country, necessitating a wait of from two to four weeks, sometimes longer, before the arrival of the goods.

Freight, Damages, Etc.—Freight and drayage is an item that is added to the cost of the goods, the same as an item of production. If the goods are bought of a home merchant, the price includes the freight, and the goods are placed in the home free of any other charges. If they are purchased from a mail order house the freight is usually not considered and is to be paid by the purchaser on arrival of the goods, besides the extra trouble of unpacking and setting up the furniture. Freight alone sometimes makes a difference in price between mail order and local concerns of from five to twenty per cent, owing to the distance of shipping points.

In receiving a shipment, one should be sure to see that the goods are not broken before taking them from the freight house, and before signing a clear receipt for them. As soon as the receipt is signed the railroad company is released. If anything is broken, a breakage or damage notation as to what is broken must be made upon the freight bill, by the freight agent. After a satisfactory notation is made, the receipt for the goods may be signed. After broken parts are replaced at your expense, a claim must be filed against the railroad company, with a paid invoice of the repair expense along with the freight bill showing the breakage notation, if remuneration is expected. A settle-

ment for damages will come as soon as the transportation company sees that the claim is just, which takes from thirty to ninety days, sometimes longer. As soon as a shipper places goods in a freight house and obtains a signed receipt for same from the railroad company, he is no longer liable, and in the event of breakage or damage in transit the settlement must be made between the railroad company and the person to whom the goods are sent or consigned.

Think Twice Before Buying on Installment Plan-It sometimes occurs that when young men are ready to establish a home they are financially limited. Up to this time they have probably lived comfortably, but have accumulated very little money, consequently they seek the installment store for their furnishings. The installment or credit business has greatly developed in the last twelve or fifteen years. There are two kinds of installment stores, although few people One is the sort that will are aware of the fact. extend a reasonable amount of credit with a certain amount of cash demanded at time of purchase, the balance to be paid within a reasonable given time. Almost every first-class store will extend such credit, although they may not advertise it. This kind of a store does a great deal of good in its community in that it sells goods of quality at a reasonable profit. The second is the store that will sell almost any amount of goods with a small payment down, with an agreement that the balance be paid in small weekly or monthly

installments. They usually have an inferior grade of goods and sell at a large profit. While this kind of a store poses along with the first mentioned as a credit house, this is the one to shun. If their inferior grade of furniture is bought it will probably wear out or fall to pieces before it is paid for, or if their goods of quality is selected the price is prohibitive.

Such advertisements as: "Stop worrying, take advantage of our liberal credit plan," "One dollar down and fifty cents a week," "Pay when you can," "Let us carry the load," etc., seem to offer much, but really give little, and attract certain people, and many sales are the result. Not until one is into a deal contracted under such alluring promises is it realized that it is, after all, a burden. It will be learned that the promise of such easy payments, etc., has been somewhat magnified. Not until after the second or third month does one realize that five dollars a month on a two or three hundred dollar bill will take from forty to sixty months, or three and one-half to five years, of continuous monthly paying to pay the debt. Most young people do not stop to reason this out before they enter into their contract, otherwise, they would not assume such a large obligation.

Many a young couple has tried to go to housekeeping on a meager salary, only to be final victims of the installment house or loan shark, or both. This is due mostly to inexperience or to a lack of forethought, as the actual running expenses of the home, such as rent,

light, heat, doctor bills, car fare, insurance, laundry, grocery, and other necessary bills had not been carefully considered.

On the other hand the credit accommodation has been a good thing for some people, as they undoubtedly could never have furnished a home had they not have had the advantages of credit.

One should not object to giving the merchant proper references when asking for credit (a loan of his property). If one is not worth fifty dollars, credit for fifty dollars should not be asked, nor should one blame the merchant if he does not grant it. If a person draws but twelve dollars a week and has no other resources, how much credit can he expect? If one can not pay the first weekly bill how can one expect to pay twice that amount at the end of the second week? These things should be carefully considered before entering into any form of a contract.

A Kindly Word of Warning—A word of warning relative to the buying of goods on "lease," or "contract" or "form" or "agreement," or in whatever term it might be applied; it all has the same meaning. A "lease" is a written contract for the letting of goods on certain terms for a specified time. Failure to meet the required terms gives the owner of the goods rightful possession, and will hold good in almost every state. When a bill on a lease is paid, obtain the original signed lease or contract and have it marked paid in full. Buying more goods and having it added to the former lease makes all the furniture on that lease

liable to seizure by default by the firm from which they are purchased, as all the goods will show to be on the same contract over your signature. However, when one needs more goods and hasn't additional money it is a good plan to bind the previous bill of goods with an additional form of contract, thereby gaining credit and securing the merchant. It is the best plan to pay for one bill before entering into another contract. There are many forms of contracts or leases, so be sure to read the agreement before signing, to know exactly what is expected of you.

Many unprincipled business methods will be found. Catchy schemes and bright salesmen are sometimes alert to take advantage of the unwary. Warning should be taken against such schemes as the following: A second-hand sewing machine is advertised for sale. The advertisement is answered and probably a machine is bought, and yet day after day the same advertisement appears in the paper. A second purchaser calls and he will find another machine, hears the same story about the owner having to leave the country on account of poor health, or some equally pathetic tale. A thorough investigation will reveal the fact that this so-called private family is acting as an agent for some second hand or unscrupulous concern, and that the constantly appearing advertisements serve as bait for the unsuspecting public. All kinds of house supplies are disposed of in this manner; the agents will tell almost anything, many times misrepresenting the goods, and only too late it is discovered that the article

was not "Solid Mahogany" or "Genuine Quartered Oak," but merely a poor imitation. In large cities many schemes are being devised daily to lure the inexperienced into buying a lot of cheap goods that are not fit to go into a home. The smaller cities and towns prove a poorer field for such operations.

Country folk also prove easy victims for schemers, and it is surprising how often they are duped into entering into contracts without a thorough investigation. Cases have been known where agents selling an article to country people, especially, guarantee to allow from four to five years to pay the bill of \$45 or \$75. The agent agrees to take a note made out for three months for the amount, and promises at the end of that time to renew the note for another three months. The promise sounds good and the contract is closed. The note is taken to the nearest bank that will discount it, the agent gets the money and when the note falls due in three months the bank expects a settlement from the one who signed it, while the agent by that time is working some other territory and is not to be found.

Trading Stamp, Premium and Gift Schemes—Many premium, trading stamp and gift schemes are offered as an incentive to trade, but every one knows, or should know, that nothing is given away. The consumer pays for everything he gets. A man stated that his friend tried to induce him to join a soap club in order to get a premium. His answer was that he would have to pay more than the regular price for the soaps and spices if he were to receive a premium. His friend insisted that

he would not, but to satisfy himself, he telephoned to his grocer and learned that the articles could be bought for at least ten per cent less. Regardless of the fact that the price of a premium is provided for in the balance of an order, some people continue to believe they are getting it for nothing.

Do not be the victim of fraudulent furniture clubs in which you are to pay from twenty-five cents to one dollar each week or month, in order to obtain glittering premiums, or furniture at discounts. Do not be deceived by the concern that offers you a card of introduction to another larger concern, possibly in another city, giving you the impression of buying goods at manufacturers' prices or at wholesale cost. The small concern will get at least a commission, and the larger concern will get the regular profit. No difference what their claim may be, it must be understood that goods are sold for a profit the world over, and not for sake of friendship. A business to live and thrive must pay profits and to do this must give value which is the essential element in every sale.

Books could be written on the experiences of people who are easily influenced by unscrupulous business methods and yet through such methods great establishments continue to prosper.

Dishonest Buyers Harm Honest Buyers and Honest Merchants—Dishonest people have helped to make the credit or installment business a hard one. These people actually make a business of going from place to place, pretending almost anything to obtain goods on credit.

After paying a few installments on the debt, they move to another city to do the same thing over again. Some even go so far as to try to sell the goods that they have purchased on a lease or contract, and many have been successful. This is a penitentiary offense and is a risk not worth taking. As stated before, goods obtained on a lease belong to the owner of the goods until they have been fully paid for and until that time, an enormous risk is taken in undertaking to ship goods out of a city, under an assumed name or otherwise, or to move them to another part of the city or into another house without first obtaining the consent of the person who owns the lease or goods, providing such terms are in the lease.

For their own protection, dealers all over the country are forming into associations; first into state associations, the state associations into a national association, and it is becoming easier daily to locate the dishonest buyer. Even if a buyer moves across the continent, some dealer in the locality to which he goes will be notified through their association, and the person is usually found.

Eliminating and Discriminating—The order of things in the mercantile world seems to be that the poor man pays the long price for everything, while the man with the money in hand buys at the short price. Why should a man who has to labor hard for his money pay more for an article than the man who is not so unfortunate as to need accommodation on a purchase? This in a sense is true, and yet almost all

stores cater to the public and not to a certain element. As buying is a process of eliminating as well as discriminating, there is no reason why any man should not go into the very best stores in the city. It is the buyer's own fault if he pays a high price for inferior goods, for if he familiarizes himself with the market, he will no doubt learn that he can buy a superior quality at this same price. Inferior goods deceive, in as much as they are made more for appearance than for practical use.

Leaders or Specials—The advertising of "leaders" or "specials" is a great modern method of getting business. Those leaders in most cases are advertised solely to attract attention. Go into a store and try to buy several of the advertised specials and nothing else, and see what success you have. Usually no leaders are sold if the buyer can be persuaded to take something

on which a more substantial profit is made.

Terms Should Be a Secondary Consideration—Some dealers advertise to furnish four rooms for, say \$87, or five rooms for \$99. This can be done, but the goods will not last any length of time, and will not justify the investment. It is the buyers of such furniture who seem to overlook the quality and allow "terms" alone to influence them, who help to make such stores thrive.

Better to Buy Where Acquainted—For some reason young people seem to be somewhat embarrassed when looking for furniture, and often prefer to buy of strangers instead of merchants whom they know. On the other hand most salesmen would rather wait upon

a total stranger than on a friend or acquaintance. Usually the purchaser doesn't feel as much obligation and asks more attention from a stranger than if the salesman is known. Again some people dislike the idea of having their friends know that they are obliged to buy on credit (when necessary), and consequently go to a stranger. This is false pride and serves to increase rather than to limit the knowledge of their financial standing. In most cases when credit is asked by a buyer, his rating is investigated and he is advertised, confidentially, among the other credit houses as seeking credit. This is about the only way that merchants have of protecting themselves.

In ordering supplies from the large mail order credit houses in the cities, as soon as the order reaches them, the name of the buyer is usually sent to the credit department. This department is often very large, sometimes an entirely separate department, or perhaps several stores will join together to help maintain this one department. The names are referred back to one or more merchants, or to an attorney in the buyer's own city, to ascertain exactly how they stand among the business houses. The following is an example of such a letter:

"Dear Sir—As a business courtesy, we would greatly appreciate your answering the few questions below in regard to the party mentioned, it being understood that no responsibility is thrown upon you. Hoping we may be able to reciprocate at some future time, we remain,

Yours respectfully,

CREDIT DEPT.

Name—Mrs. John Doe. Address
Is my description above correct?
Is party honest and of good character?
How long have you known the party?
Is party prompt in meeting obligations?
White or colored?
Do they own property?
This party desires a credit amounting to \$
upon which she wishes to pay \$ and balance
\$ per week or month. Would you consider
this a good risk? Enclosed please find
stamped envelope for answer."

By such means they get a detailed report on the purchaser before sending goods on credit, and in the meantime use the money that is sent with the order. If a favorable report comes back from the majority of the answers in the letter the goods are forwarded, otherwise the deposit refunded.

#### CHAPTER II

Woods—All kinds of woods have been used in the manufacturing of furniture, viz., pine, ash, elm, oak, mahogany, gum, walnut, beech, maple, birch, hickory, etc.

In the sixteenth century the principal woods used in furniture were walnut, beech, and oak. The best authority tells us that mahogany was introduced in the eighteenth century about 1710, because of the liability of the other woods to decay by being bored by small worms.

The principal woods used in making furniture today are oak, mahogany, walnut, birch, maple, elm and ash.

There are many varieties of mahogany and the natural characteristics indicate the country from which it comes. Some mahogany is stronger than others and this variety would be used, for instance, in that part of the chair that would necessitate the greatest need of strength, as in the legs. Other varieties can be used for the backs and seats of the chairs.

It is said that fully sixty-five per cent of all the furniture shown at the great furniture exposition city of the world is in this wood, in its various finishes, notwithstanding the fact that the cost is gradually on the increase.

Birch is a hard, white, close grained wood and is

remarkably suited to take a mahogany finish, and when so finished is sometimes hard to distinguish from mahogany. It is made up into the less expensive furniture.

Walnut is now used a great deal; especially is there an increasing demand for the Circassian walnut. Circassian walnut is rather expensive. The high cost of converting it into furniture is due to the remote regions in which it is found. It has a very hard, smooth grain and on this account is used in the manufacturing of fine furniture. In this, as in all woods, there is a substitute in the "gum" wood, which can hardly be detected. This is soft and porous, but serves as a very good furniture material.

Satin wood is another beautiful wood that goes into furniture, but it is used very little, as it is far more costly than any wood known to American manufacturers.

Oak is one of the most abundant woods in this country and reputable manufacturers are as particular about the selection of their oak as of the other wood that they use in making furniture.

The botanical classification of oaks divides them into two families; one the white oak family, maturing its acorns or fruit the same year that it blooms; the other the red oak family, maturing its fruit the second year. It is possible, therefore, to establish positively the identity of the two families when they are growing and in fruit. To distinguish them in furniture is very difficult and often puzzles the expert.

Oak is finished in many colors, the principal ones of which are weathered, early English, fumed, dark golden, light golden, malachite (green finish), and Flemish (black finish), the last two being practically obsolete. The first five finishes are the most popular today. The dark shade of golden oak that has been popular so long seems to be sinking into disfavor, as much goods are being shown in the light golden oak finish, and it will be but a short time until the light finish of golden oak will lead. The highly polished finish is being displaced by the waxed finish, which makes a very attractive and serviceable wood. Fumed oak has a subdued brown effect and is found mostly in arts and crafts or mission designs, and is very practical for living rooms and dining rooms, owing to the very hard service that it will endure. The demand is growing more and more for the light fumed finish rather than the dark fumed finish, which has been so very popular. Acid stains are used a great deal by the concerns which have no fuming rooms. The genuine fumed is the desirable finish, as this furniture goes through first a process of moistening to open the pores of the wood and then is put in an air-tight room in which very strong ammonia is allowed to evaporate and penetrate the wood. The pieces are left there as long as necessary to obtain the required color, and finally removed to be sanded to a smooth surface, and in some instances extra stain is added to make the color of the article uniform, as uniformity is sometimes lacking, due to the many pieces of wood used in a single article, which are often taken from many different trees of various temperaments. Almost every other color than fumed is a surface color and does not penetrate to any depth, and will, therefore, wear off when used on furniture that has hard usage, such as arms of chairs, etc., while the genuine fumed finish is practically everlasting.

Various finishes are given to woods by the use of different stains. This being the case, one stained finish should not, and does not, cost more than another.

Walnut takes different shades due to the different stains used.

Mahogany, when finished in its natural color is light, as also is birch, and the dark finish that is so often seen is made by the use of stains, and is not the natural color of the wood, as most people think.

Before the stain is applied, the piece of furniture is spoken of by the manufacturer as being in the "white" finish.

Bird's-eye maple is light in color and is usually obtained in veneers. It makes handsome furniture for bedrooms, but is not now used as much as in the past. It will darken in color with age, and after a piece has been used a while the color is very difficult to match. The lower priced bird's-eye maple furniture has plain maple posts with bird's-eye maple veneer panels and cross-banded veneers.

White, ivory and French gray enameled furniture is very tasteful, but can not be recommended unless purchased through a dealer who handles high-class goods, as it would be folly to buy anything but the very best of such furniture. It requires a very large department and a detailed process to develop a finely finished piece of enameled goods, consequently a good quality is fairly expensive. Unless one purchases the enameled ware that is produced by the very best of manufacturers, who are very particular about the material used in the furniture, one might get hold of goods that are enameled over knots and other blemishes in the woods, and which might not be discovered for some time.

The use of gold furniture is recorded in the sixteenth and eighteenth centuries, and is especially applicable in the present day for the refined artistic furnishing of a modern drawing-room, music room, or reception room. The laying of real gold leaf on furniture is, in most respects, a secret process, and but few craftsmen in this country understand the art.

Printed Imitation, Called American Oak—A machine is made that prints the grain and splash line figure of quartered oak on other woods. This work is also extended to wall paper in various shades to imitate oak with several different finishes. This process involves an exact reproduction of oak by making the die or printing plate direct from the wood itself. The work was extended to the reproduction of other woods, including more particularly mahogany, but it has finally settled down till it is to be seen mainly in the reproduction of quartered oak figure. It is applied to plain woods, like white gum or elm, as it makes a better appearance, possibly, than the natural wood without fig-

ure, but does not take a finish that will qualify it for comparison with the real article. The greatest harm this can do is to lessen the favor of the real quartered oak because of the prevalence of this rather gaudy imitation, which is being sold as "American oak." This is confusing to the buver because the best of quartered oak is purchased in this country. On the other hand, America produces no genuine mahogany, so the term "American mahogany" is easily understood as being only an imitation in stained American wood. Therefore the so-called American oak should be called nothing else than the imitation oak. One dealer made the statement "that he had been in business two years before he could tell the difference, the imitation being so perfect." The public demands, in some respect, the artistic figure; at the same time the greater preference is for the less gaudy and for the figures in wood that are more restful to the eye and less disturbing to the senses. The retailer makes the demand by unloading a lot of such goods in homes of uneducated people who are usually attracted by advertisements that set forth "terms."

How to Detect It—To detect this imitation oak, simply turn the article so it can be seen on the under side and one can easily determine whether or not it is the real or genuine quartered oak, or the imitation oak termed "American oak," as that side will show no such graining.

Plain Oak—The term "plain oak" is used to distinguish the wood from quartered sawed oak. Some

salesmen call it "flat grain oak," which merely signifies that it is NOT quartered oak.

Quartered Oak—This gets its name from the process a log goes through when being sawed. The log is cut in four quarters and each quarter is sawed in such a way as to show the beautiful flaking of the wood on the surface of each slab that is cut therefrom.

Vencered Versus Solid Woods—The word "solid" is associated so closely with the idea of durability and stability, that it has created a wide-spread prejudice in the public mind against veneered furniture, which is not in keeping with the facts.

Before definitely deciding on the question one should inform one's self as to the relative qualities of veneered and solid furniture.

In the first place, veneered furniture is not made with the idea of it resembling the solid wood. They do not appear alike in the least. Some people believe they are being deceived when they are sold veneered furniture. The veneered furniture is the most beautiful furniture we have, because the veneers are so beautifully blended and matched. Built up veneered goods are as expensive, sometimes more so, than solid woods. The finest and prettiest mahogany furniture is always veneered, because the solid stock is generally plain, without special figure, while a nicely veneered piece of mahogany brings out the figures in the wood.

The veneered "panel" is generally made of five sepa-

rate layers, thoroughly glued together, and the glue joints dried under great pressure. The center or "core" is of some wood which will hold glue well and is nearly the thickness of the finished panel. Around this is built a narrow frame of solid oak, mahogany or other wood, to correspond with the finish of the furniture. Across the grain of the core is glued on each side a thin veneer of some soft, glue-holding wood, across the grain of which is glued the outer veneer which takes the finish.

It is almost impossible to break or crack properly made veneered panels, and the glue joints are protected from moisture by the finish which is put on the furniture, just as is done in solid pieces.

In solid furniture all wide surfaces such as tops of tables, desks, dressers, panels, etc., must be composed of more than one piece of lumber because it is impracticable to secure one piece having a sufficient width. These pieces are glued together. Should a piece of solid furniture be subjected to sufficient moisture to penetrate the finish, the glue joint will loosen. The only conclusion is that veneered furniture is as strong, if not stronger, and more likely to endure than solid pieces. In event of scratches or defacements, one is as easily repaired as the other. Genuine quartered oak and the finer woods used in manufacturing furniture would cut to an enormous loss if worked up into boards for solid furniture. In an inch thickness of quartered oak, or other beautifully grained wood, the

"pattern" would be lost so that the exquisite "matching" that exists in the fine veneered furniture would be impossible.

Glue—The average person would be surprised to learn how big a part glue is taking in holding together the furniture in the home. Owing to the great strain that furniture is subjected to, the glue joints are the vital points. Glue experts claim that a glue joint is stronger than the wood itself, and whether this be so or not, glue is a most important factor in all fine furniture, and is used almost to the entire exclusion of nails, screws or pins, and the care with which the gluing is done and the grade of glue used, generally indicates the quality of the furniture.

The Effects of Dry Air on Furniture—Much of the trouble with furniture glue joints spreading or pulling apart is caused by the extremely dry atmosphere in the house. This may be overcome to a great extent by placing vessels containing water on the radiator or heater. In houses where furnaces are used a small bucket, about four inches in diameter by five or six inches deep, can be suspended under the register in the floor. By lifting the iron register the bucket can be filled when empty.

#### CHAPTER III

Rattan, Reed, Willow, Fiber Rush Furniture—These terms at first are rather confusing to one who is not familiar with them, and it is well to be posted in a measure, at least, as to what they represent.

The German, Chinese, and American rattan is practically the same thing, and is grown in almost the same locality in China, and some of the East Indies. They grow in a wild state over rocks and up through and over tree tops, and some reach a length of hundreds of feet. They have a thorny outer bark which makes the rattan hard to handle, but the natives cut the rattan and let it lay until, by drying, the thorny outer bark peels off, leaving the smooth rattan with a nicely enameled outer surface. The natives cut the rattan into lengths of from twelve to fifteen feet and carry it on their backs to the nearest market. The Chinese forward their gatherings of rattan to the great rattan market of Singapore, China, where the American and foreign houses have their agencies. The rattan is sorted, cleaned, graded, and shipped to the splitting factories in America and Europe. The different localities in which the rattan grows have a great bearing on its texture. The kind that has its roots in swamps has a coarse, woody fibre, while the rattan

which grows on the high ground has a smooth, white appearance and is tough.

By special delicate machinery, the outside of the rattan is split off and used for cane rush, such as is used in cane-seated chairs, and the center which is left is run through machinery that makes the "reed." German and American reed is made by the same kind of machinery.

The Chinese reed is made from the poorest quality of rattan, which the American and European markets reject, and, as they manufacture the reeds mostly by hand, they are forced to use acids to remove the cane from the rattan. The acid takes the life from rattan and causes it to be brittle and easily broken.

"Willow" has a hollow center, while rattan has a solid center. Rattan is of a long fibrous nature, which makes it especially good for bending without breaking, while, owing to the roughness of willow at the small joints where leaves have grown, it is not so well adapted to bending purposes.

There is a twisted Chinese grass that has been made into furniture and introduced into this country. The styles of these goods are beautiful and the prices reasonably low, but if the construction is carefully examined they will be seen to be too poorly made to give lengthy service.

The "fiber rush" furniture, introduced within the last dozen years, has passed the experimental stage, and can be highly recommended for good hard service. It is simply a twisted paper which has gone through a

very severe preparation which enables it to withstand the hardest kind of wear and abuse from exposure to weather. It is used the same as reed on a wooden frame work, and has displaced, to a degree, the grass furniture, having in its favor strength and the lack of the odor that accompanies grass furniture.

## CHAPTER IV

Leathers-In buying black leather goods one should select nothing but the best grade of No. 1 leather, remembering that there are three grades of genuine black leather. It takes about six weeks to convert raw hides into leather. The hides are moved along from one tanning vat to another, each solution contained therein becoming stronger, until the final vat contains nearly pure tannic acid. On completion of the tannic process, a machine divides the hide into three distinct layers, of which the upper layer is most valuable, possessing nearly all of the natural grain of the hide. This is reserved and made into what is called No. 1 leather. The two remaining layers, or flesh hides, are called split leather and are without natural grain. They are spongy and contain little to resist the hard wear that is so often given leather-covered furniture. No. 1 leather is used for the best grade of upholstery and for every piece of this grade, remember, there are two of the inferior grade. This accounts for the oft-written advertisements calling attention to a couch, for instance, covered with leather, for say, fifteen dollars, apparently low in price. It is low in price and that is all. It will not give good service because it has not the qualities of the best part of a hide which is made into No. 1, or the best grade of leather. If that same couch were covered with No. I leather, the price would be about double the one advertised.

The following article, "The Difference in Leather," by Edw. T. Harris, written for the Grand Rapids Record, while lengthy, is full of valuable information, as leather is an important factor in furniture making:

Currying and Buffing-"While careful and thorough tanning is all-essential for the production of good leather, its practical usefulness for purposes where appearance and flexibility are important, depends upon the second stage of its preparation, known as currying. The hide, split into layers, is received from the tanyard in a rough and intractable condition. Sometimes the tanning process has not been fully completed, and after a little stretching and manipulation, it receives a further soaking in the tan liquors. After this it is 'slicked out' on a large table, the process being that of stretching and scraping with a smooth, blunt scraper to remove the creases. The 'splits' are then ready for finishing, but the top layer, which has the natural outside or grain layer, is subjected to a process of buffing. This is done with a sharp scraper having a turned edge. This is worked over the grain side and removes a very thin layer, little more than the down on a peach, making the grain more receptive of colors and finishing materials. Of recent years a system of machine buffing has come into vogue whereby this outermost layer is removed in one piece, making a very thin tissue. It may be seen used to cover memorandum books and for other purposes requiring little or no

tensile strength. Of course, the hide from which a machine buffing has been taken has not as strong a grain as one from which only the slight scrapings of the hand buffing process have been taken, and is therefore not as valuable, but the manufacturer has his "machine buff" to sell and thus it is to his advantage. Hand buffed leather is the highest grade, as may be seen, and commands an advanced price over machine buffed.

The Treatment of "Splits"—The splits, having no natural grain surface, require a different treatment looking to the production of an artificial grain or surface. They have a more or less rough nap, like the under side of any leather. Before they can receive a finish, this must be concealed. A sticky preparation made of linseed oil and other ingredients is applied to the skins, which have been stretched taut on a frame. When this coat is partly dried, it is smoothed down, laying the nap all in one direction. The process is repeated until a smooth, even surface is obtained. Hides which are to be finished in light tones have been subected to a bleaching process prior to this.

From this point the hand or machine buffs, with their natural smooth surface, and the splits with an artificial one, receive similar treatment for a time. Various coatings of varnishes are applied, containing the colors which are desired. The basis of these varnishes is linseed oil boiled to a jelly-like mass and thinned with other materials. The skill of the currier is here displayed in his preparation of varnishes, or "daubs," as they are called, which will preserve the leather, wear

without cracking or peeling, and be of an even color or tone throughout. The mixing of the colors is an art in itself. Several modern processes along this line have been tried by some manufacturers, such as the application of a highly inflammable solution of gun cotton which dries on the outside but remains soft underneath. The old-fashioned methods are still generally used, however.

The final process is the production of the "grain" or characteristic appearance of the natural skin. In the many processes to which the hide has been subjected, the natural grain has been all smoothed and "slicked" away. For shoe and other leathers this is desirable, but for upholstery, bag and other purposes, a more or less roughened surface is wanted. The split leather has had its grain surface removed, therefore it is impossible to give it a natural grain. The outer layer or buff retains its grain and it merely needs to be manipulated by a process known as "boarding" to come out again.

The Reproduction of Effects—Modern inventive genius has made it possible to reproduce the characteristic grain of any leather on the beef hide. Generally, the natural skins are too small or present other difficulties which prevent their use in upholstery. Therefore, the manufacturer has a photograph made of a typical surface, a reproduction is made in the form of a plate, almost identical with the plates used in newspaper or book printing, and this is used in a powerful press to "print" or emboss the desired sur-

face. It is in this way that grains, such as elephant, hippopotamus, seal, monkey and others, are produced. Elephant and hippopotamus hides have a deep, rough and irregular grain, seal has an even, rounded grain, and monkey a rougher, blistered appearance. Real seal was formerly used, to some extent, in upholstery, as the skins are often as large as those of cattle. It must be noted that these are not the fur-bearing seals which are only found in the North Pacific, but the white or hair seal, a much larger animal which is captured in the North Atlantic and Arctic regions, In the old whaling days, many of them were brought in, but with the decline of the whaling industry the supply has become so small as to be negligible. The natural seal has a fine, bold grain, reproductions of which are popular for purses and ladies' handbags.

How Leather Is "Boarded"—Although this printing process is necessary on all split leather, the buff layer has its natural grain, as mentioned, but in an undeveloped state. The means of bringing this out seems ridiculously simple, but like many things requiring dexterous hand manipulation, demands a great amount of skill and experience on the part of the operator. It is almost exclusively a hand operation. The hide is laid upon a smooth surface or table with the grain side up. It is then folded over on itself and the workman rubs it back and fourth, bearing heavily on the fold with a curved board fastened on his forearm, something like the shields worn by ancient warriors. It is from this "board" that the process is termed

"boarding." Numerous patterns may be produced in this way, depending on the number of times the skin is boarded in different directions. Thus one boarding would produce a surface of little creases or corrugations all running one way. By shifting the skin slightly and repeating the operation, another set of creases is produced at a sharp angle to the first, making what is known as "long grain." If the second creasing had been at a right angle to the first, little squares would result, called "box grain." The so-called morocco grain is produced by boarding at a sharp angle which makes the characteristic diamond-shaped grain. The "round grain," which is generally used for upholstery purposes, is produced by boarding in several (usually six) directions. By taking a piece of smooth leather and rubbing the creases under the hand on a table. these grains may be readily produced, although not permanently.

Spanish Leather—Spanish leather, which has become popular of late years, has several distinctive points. Most of what is now sold as Spanish leather is produced upon "splits" by the printing process described above, in imitation of the real Spanish leather, which is really an "antique material," like the antique tapestries which are now in favor. The real Spanish leather was made in medieval times, before modern processes were dreamed of, and its reproduction demands a return to the crude methods of the time. Its typical surface, deep, irregular creases surrounding comparatively smooth areas, is largely a result of the

tanning, rather than the finishing. Modern hides are tanned by placing them in weak tanning solutions first, gradually increasing the strength in order that the skin may be gently and thoroughly permeated by the tannic acid. The ancient craftsmen were unacquainted with this refinement, and dumped their hides unceremoniously into the strongest tanning liquor they could make. This strongly astringent solution naturally attacked the outer surface at once, making it tough, uneven and full of creases and wrinkles. When it came to finishing the hide, the tanner was unable to smooth out these wrinkles and they thus became characteristic of this type of leather. The coloring also was done in a crude manner. Several batches of coloring material, differing more or less in shade, were "sloshed" on the surface and scrubbed around or wiped off. The result was an uneven coloring, darkest in the creases, of course, and almost defying imitation by modern methods. Real Spanish leather, produced by the old methods, is probably unequaled for upholstery use. The imitation, printed on splits is neither better nor worse than any other finish of this class.

How Modern Morocco Is Made—Morocco is also a popular leather, largely imitated by the printing process on cattle hides, for the real morocco is made of goat skins, which are not large enough for many uses. This type of leather was also developed in Spain, mainly by the Moors, who occupied Southern Spain at the time. From them the art spread

over Northern Africa and thence to Turkey and other Mediterranean countries. It is now largely made in England, the process requiring much hand manipulation and careful attention to detail. American manufacturers do not appear willing to expend the necessary time to produce the better grades. The first point of difference is in the tanning material used, the powdered leaf of a species of sumach which grows naturally about the Mediterranean. The finest sumach comes from Sicily, where it has long been cultivated and is a leading export. Goat skins, tanned with this material, are nearly white, and unaffected by light. This is a valuable property where light shades are desired in the finished skin. The real morocco is also colored by natural vegetable dyes, such as are used in the best grades of Oriental rugs and with the same happy result. The best imitation of morocco is made of sheep skins tanned and finished by the same process. The skins are similar in size, and when finished can only be distinguished by the expert. The test of time, however, reveals the deception, for sheep skin has a peculiar loose or spongy fiber which does not wear well. The goat is a hardier and tougher animal in all respects, and his hide partakes of his nature. The sheep moroccos are available for book-binding and for small, fancy leather goods where they are not subject to strain. Real morocco is very tough and hard wearing.

Cordovan and Russian Leather—There are numerous other varieties of leather which occasionally come

to the notice of upholsterers, but usually in the printed imitations rather than the real thing. Among these may be noticed Cordovan, which is of the same general type as Spanish leather, as the name would imply. It is heavy leather, but soft and fine grained, the grain being natural and not produced by boarding. It is the chief variety of leather used in the Orient, and is often dyed in brilliant reds and yellows.

Russia leather is chiefly used for book-binding, its leading characteristic being a peculiar odor developed by the use of the bark of a species of birch in tanning. Other barks are also used, in which case the essential oil of birch is rubbed into the hide in finishing. It was first developed by the nomadic tribes inhabiting the steppes of Russia. A curious feature of the finishing process was that of sewing two hides together face to face, forming a sack which was filled with the dyeing solution and left until the desired color was obtained. This leather is also produced by modern methods, the oil of birch being rubbed into the flesh side of the hide to give the typical odor.

Shagreen is a species of morocco leather with a peculiar rough grain. This is produced while the skins are damp, the seeds of a native Oriental plant being stamped into the surface and then brushed away, leaving a curious granulated finish. Real shagreen is too hard and stiff for upholstery work in general."

Leather Will Crack—Nothing will prevent split hides from cracking, and manufacturers who use such goods on their products will not guarantee the quality to the dealer. The best quality of leather is guaranteed from defects and flaws only, and not from wear and tear. The general impression is that the best grade of leather should last forever. This is not the nature of anything, much less that of leather. There are, however, several good oils on the market which are used as an elixir, and it is money well spent to get one of these and go over leather goods occasionally. It will do much toward making them long lived.

In buying leather upholsteries, the inexperienced must necessarily depend upon the reputation of the concern of whom they buy, owing to the many imitations upon the market. By feeling the leather, however, one can detect the best grades by the fine grain and soft effect which they seem to possess, as against a stiff, brittle, hard effect that is a characteristic of the second or cheaper grades.

Imitation Leathers—There are many imitations of leathers on the market, namely: "chase leather," "Boston leather," "imperial leather," "besto leather," "victor leather," "leatherette," "fabricoid," "markolene," "mule skin" and many others, besides imitations of the Spanish leather. Each manufacturer has a particular name for his own make, and possibly a different way of manufacturing them, which accounts for the many different kinds. Imitation leathers wear very well and cost about one-half as much as the genuine leather, and great quantities of it are being used, with the understanding, of course, that it is a

substitute. These materials are made of a heavy satin fabric with a coated finish and grain, in exact imitation of the finest grade of hand-buffed black leather, and are far better for wear than the poor grades of split leather. They come in the popular upholstery colors of black, red, brown, green, and tan, better enabling one to carry out any desired color scheme.

Furniture Coverings-The selection of a proper fabric for covering furniture demands careful consideration. The style of the frame of the piece should decide what cover is needed, whether it be damask, velour, brocade, tapestry, leather, or some other fabric. It is, however, essential that the relation be harmonious between the style of the frame and the covering. Certain periods were characterized by the use of a particular fabric. The mission style is usually upholstered in leather. The pattern and color effect of the covering should be selected according to the light of the rooms and the color scheme, tinting of the walls, etc. Everything in the line of upholstery fabrics can be found in any large stock, from the ordinary low-priced denims to the domestic and imported French tapestries, representing an outlay of hundreds of dollars for even a small sofa covering. Many beautiful domestic Verdure tapestries can be had at a medium cost. The French tapestries are more tightly woven than the domestic tapestries, and, although more expensive, the colors hold better. A dealer can usually advise along these lines of proper fabrics, if aided by samples or idea of color scheme desired.

### CHAPTER V

Period Furniture—While it is not the purpose of this book to go extensively into the subject of antique furniture, yet period furniture enters into the present day needs so very materially, in that the old ideas are being used either in reproduction or as a foundation for furniture building, that it would be impossible to omit the subject altogether.

People of moderate means so often associate the word "period" with "high prices" that usually when a period suit is suggested as being appropriate, thoughts of extravagance enter the mind and the consumer will buy the more modern goods at possibly the same price, without even investigating the prices of the more distinctive furniture.

Period furniture is not for the millionaire only, but for the man of moderate means as well. This statement can be verified by a visit to any store with a fairly good size stock of furniture. As demand really dictates the styles, the furniture dealers have fallen in line with the demands of the time, consequently displays of Louis XIV and other famous styles may be found in such stores.

Furnishing a home is an art to which people are giving more and more attention. It has led to the study of the history of artistic furnishings, and the

result is that people are becoming more generally acquainted with the vogues of those historic days when people lived amid artistic surroundings and when each bit of furnishings of the home, from the brass knockers to the candles and chairs, were works of beauty and significance. Those days are being revived with this change: That whereas the people of a certain period of history lived with the art of that period, the people of today are acquiring the sum of all these arts for their homes. Thus, one room of a home may be furnished in one design, and another room may represent an entirely different period of history.

Study Kindles Desire—The desire for period treatment on the part of the home folk is an indication of progress, influenced to a degree, at least, by association with good literature, paintings and music. Beauty, art and harmony are qualities which from the beginning the designers, artists, musicians and writers have been endeavoring to express. In every material creation we see these attributes, and a more fitting field for the featuring of usefulness, beauty, art and harmony could not be found than in a home.

We welcome this awakened manifestation of art in furniture as reproduced from the classical creations of Thomas Sheraton, Messrs. A. Hepplewhite & Co., Thomas Chippendale, Adam Bros. and others. The quest of the beautiful by present-day furniture designers has led them to recognize that its best expression is found in the products of those old artisans. The survival of the fittest is the law of progress, and that

period furniture must be the fittest is demonstrated by the fact that while many styles have come and gone, period furniture is more popular today than ever. A style of furniture known as L'Art Nouveau, which was ushered in a few years ago with a great deal of enthusiasm, has almost been forgotten. The designers of this style of furniture went directly to the plant and animal life for their motif, and while there was much to commend in L'Art Nouveau furniture, it was popular for but a very short time. It is a design, however, that seems to have found a place in much of our pottery and jewelry.

Nothing retards the wide use of any commodity so much as high prices. The quantity that can be produced and distributed of a given article regulates its cost to the consumer to a very great degree. The makers of period furniture are finding such a demand for their product that they are now turning out beautiful, high-class pieces at prices within reach of all. The opportunity should not be lost just now to say that, because of the enduring quality and beauty of period furniture, the housekeeper should regard the money put into it, not as expended, but as invested. A piece of furniture that is, regardless of the passing fad, always in good taste, such as period furniture, is worth all, if not more than, its original cost at any time, so long as it is not actually worn out.

Samples shown at the great semi-annual furniture expositions for many years have demonstrated the truly remarkable progress made in the design and

quality of furniture up to the present time. This does not mean that there has not always been really good furniture produced. The old high-grade manufacturers have endured, perhaps, because of the high standard they set, and they have influenced others to follow.

English Furniture Predominates—The greatest present-day demand is for English furniture and furnishings in the styles made classic by the early cabinet-makers. The Georgian period, including the work of Chippendale, Hepplewhite and Sheraton, seems most in favor, probably because it lends itself more easily to the uses of the day, and because it gives the decorator a wider scope in which to exercise his inventive and adaptive genius. The earlier English styles, the Tudor, the Elizabethan, the Jacobean, and, in some instances, William and Mary, are reserved for special treatments where the size and character of the room permit them to be used as they should.

# Chronological Arrangement of Period furniture

PERIC	DDS OF STYLE
ENGLAND	FRANCE
SOVEREIGN STY	LE SOVEREIGN STYLE
Clizabeth 1558 REIGN OF TUDORS Tudor Furniture originated	Francis I 1515 to 1547 Premier"
during this period.	ethan'   Denry II 1547   "Henri to 1559   Deux"
Early d. 1603 J. "Jacobs	ays of can' 1560 }

## PERIODS OF STYLE

· ENG	· ENGLAND		FRANCE	
SOVEREIGN	STYLE	SOVEREIGN	STYLE	
James I	1603 ) to 1625 \	Charles IX 156 to 157	· }	
Charles I	1625 ) to 1649 )	Denry III 157 to 158	- {	
Commonwealth.	1649 ) to 1660 )	Denry IV 158 to 161	Henri	
Charles II	1649 \ to 1685 \	Louis XIII 161 to 164	Louis	
James II ,	1685 / to 1688 }	Louis XIV . , 164	3	
<b>W</b> illiam and Mary	to 1689 Inception of "Queen Anne"			
Hnne	1702 ) to Introduction 1714 ) of Mahogany	to	"Louis Quatorze"	
George I	1714 ) to 1727 )			
George II	1727 Chippendale's to Book pub- 1760 lished 1754	171	5	
George III	Heppelwhite's Book pub- lished 1789			
	to Sheraton's Book pub- lished 1791	Louis XV , 1715	5	
	Debased "Empire"	to	"Louis Quinze"	
George IV	1820 to 1830 }	1774		
William IV	1830 to 1837	Louis XVI 1779 to 1798	Louis	
Víctoría	1837 to 1901	Napoleon 1799 to 1814	Empire"	

Classic Period—The earliest period is that of the ancient Egyptians, modified by later Greeks and Romans, and although sumptuous, is in the truest taste. The designs were conventionalized from natural forms shaped into beautifully direct lines. The style known as Pompeian is a good example of this period, from which also came the modern ball and claw feet, beside the conventional forms of lotus, palm, petal and banded reeds.

Gothic Period—The conditions of life in this period were elementary, rude and barbaric. Furniture was made chiefly for churches, and all Gothic designs reflect their ecclesiastical origin in the invariable vertical lines of composition which carry the eye upward. The Gothic period was characterized by richly carved oak in designs of trefoil, quarterfoil, triangle and pointed arch.

Fifteenth Century Renaissance, 1400-1580—The definite beginnings of modern style are dated from this period. The solidity of Gothic effects was now united to the refinement of Greek ornamentation. The movement, starting in Italy, was carried to other nations of Europe. Hence there is the French, Spanish, Flemish and English modifications of the original Italian Renaissance, all with marks of similarity, but having details worked out in accordance with local feeling. Renaissance forms, derived from architecture, had fluted columns, large, richly carved feet, low relief decorations in scrolls, finely carved panels with Gothic

tracery and interlaced strap work, while grotesque figures were often employed. Chairs had scrolled arms and were mostly underframed.

The Italian Renaissance abounded in the greatest freedom of artistic detail, which was made to serve as ornaments for the structural lines. English artisans, on the other hand, used enrichment meagerly, while Flemish Renaissance was bold and rugged in design, with much carving subordinated to the necessities of construction. Spanish and French embodiment of Renaissance ideas was singularly beautiful and satisfying, although less elaborate than the Italian.

Elizabethan, Jacobean and Tudor Periods, 1509-1685—These periods have peculiar interest for Americans because they were the inspiration of that composite style termed Colonial. These periods show heavy Puritanical effects, squarely built tables and chairs, rectangular, box-like construction, and much use of gate-legged tables. There was turning and strap work with panels carved in low relief. A running serpentine circle was a unit in high favor.

Elizabethan—The artists and craftsmen from Spain and the Netherlands were driven from their respective countries by ravages of war and settled in England, where, under the influence of these great masters, a wave of prosperity in the Arts and in Craftmanship spread throughout England, with marked advance. The social tendencies of England's Queen, Elizabeth, and her love of the beautiful in art, supplied an im-

petus to the movement, patronized by her Royal Highness, which in all the centuries has perpetuated her noble name.

The Elizabethan in its appearance is somewhat architectural, extremely decorative, and may be said to be the most dignified and impressive of all the English styles. The principal motif in its composition lies in its massiveness, rendered with a varying contour, and the boldness of its embellishment; grotesque and nudeto-the-waist figures, interlaced strap-work, carvings, and arabesques, were among the many motifs employed in its ornament. Large bulbous turnings, elaborately carved with a strong Flemish feeling are usually apparent. Fruit and floral carvings, masks, and heraldic devices are profusely represented.

Jacobean—The Jacobean style comprises the following divisions: James I, Charles I, Cromwellian and

Charles II.

Owing to the fact that England at this period was perceptibly dominated by continental Europe through varying influences, the designers and decorators, either from choice or direction were vigorously following Italian, German, Dutch, Flemish, French and Spanish masters.

The decadence in carving, which had been the glory of the Elizabethan, was apparent to a shocking degree, and the furniture of the Jacobean became dull and characterless in comparison, but served to make for England another decorative style. The principal ornate motifs of the Jacobean style are the "S" and

"C" scrolls of Charles II, which are repeated and repeated, inverted and reinverted, joined and rejoined, in a sort of kaleidoscopic manner, finally completing a panel, cartouche or pediment.

Nearly all of the chairs were upholstered and covered in Incarnadine, a short pile crimson velvet silk. The trimmings were of tufted borders and short fringes of crimson and gold, together with gilt braid and nails of varying sizes.

Cromwellian—There are some modifications of the Jacobean style, hardly worth mentioning, one of which during the Commonwealth was invented to fit the somber habits of a somber time. It was called the Cromwellian style, and is an uninteresting debasement of the Jacobean.

Queen Anne Period, 1689-1727—The Dutch influence in art in England dates from the time that William of Orange and his wife Mary were crowned King and Queen of England. During the first part of their reign much of England's furniture was imported from the Netherlands. The demand for the style grew so rapidly that by the time Anne became Queen, it had become universal and is distinguished by the title of Queen Anne style, although the name bears no relation to its invention. The decorative peculiarities are remarkable for its plain surfaces, ornate contour and rounded detail. The legs of the cabinets, tables and chairs are of the cabriole type, terminating in a camel foot motif. The fiddle-back chairs, as well as the chest of drawers called a "highboy," belong to this period.

The combined qualities of grace and quaintness make this an individual and different type from all previous periods.

Its birth records the decline of oak, and the advent of walnut, the use of which became universal in England in the early part of the eighteenth century. Mahogany, also, was introduced about this time, or in 1710.

Chippendale Period, 1754-1812—Thomas Chippendale was a master cabinet-maker of St. Martin's Lane in London, and his style was derived from Louis XV and early Dutch models. The use of mahogany had become universal in England by this time, and he executed most of his work in that wood.

The "ribband" back chair is regarded as his best work. His chairs are gracefully made, with a wide top, which tapers to the waist; the backs tip backward slightly from the seats, which are always wider in front than at the back. "C" scrolls and ribbon backs, combined with slats and curves in pierced and open carvings, are used. Chair legs are formed in cabriole shape, enriched with ornament, but the back legs of chairs are straight and tapering.

Chippendale surpassed the French in the handling of their motifs, could design Queen Anne furniture better than the Dutch, and became famous for his wonderful assimilation of Chinese detail, with classical contour, creating and perfecting the style known as Chinese Chippendale. He published the book which brought him fame in the year 1754.

Hepplewhite Period, 1754-1812—George Hepplewhite, of the noted English firm of cabinet-makers, Hepplewhite & Co., in 1789 brought out his "Cabinet-maker and Upholsters' Guide." He was greatly influenced by the beautiful, simple classic art of Adam Brothers, and also by the classic arts revived by the excavations of the long-buried Roman cities. He visited Pompeii a few years after the discovery of its ruins in 1748.

Hepplewhite also used, in a modified form, ideas of the Louis XVI period. He produced a set of chairs for King George IV, when that monarch was Prince of Wales, which gave Hepplewhite & Co. great prestige.

The productions of Hepplewhite and Sheraton are very similar, and difficult to differentiate.

The shield or the heart-shaped chair backs, were his particular marks. The royal plume within the shield back or crowning tops of pieces was Hepple-white's original mark, and often the chair backs were carved in imitation of festoon or drapery. The Hepplewhite legs were usually tapering squares and often spade-footed. The arm chairs had arms which swept forward and downward, but not forming a continuous upright from the floor. He made sofas longer than before known, and he placed four legs along the front length. He developed sideboards, and invariably curved the front surface inward.

Adam Period, 1754-1812—The Adam Brothers who lived in the eighteenth century, were, at first, architects and builders. They were inspired in making

furniture by their admiration for Roman and Pompeiian styles, but they preserved only the delicacy of these effects, intentionally omitting what was rich.

The Adam style is much like that of the Louis XVI period. Chair legs were almost entirely straight, as they neglected the bandy shape. Satinwood, adorned with exquisite paintings, was largely used, and cane was commonly brought into service for the seats and backs of sofas. The Adam is a classic style, light and elegant of fashion, with characteristics of delicate fluting, turned legs and dainty garlands, and is fast becoming popular with the present-day reproducers.

Sheraton Period, 1754-1812—Thomas Sheraton was a designer of rare ability, and a great rival of Hepplewhite. He had a shop in Soho, London. His work resembles both that of Chippendale and Hepplewhite. The one motif of his life work was Louis XVI, which he rendered with charming individuality. One of the chief distinctions of Sheraton is in the assembling together of carving, and the inlay of delicate woods, such as satinwood, tulipwood, sycamore and rosewood, which were his favorites. His legs were generally round and fluted, reeded or otherwise embellished, although he also used a tapering square. His chair backs were original, being frequently characterized by three straight ornamented bars surrounded by the frame. He made sofas long and simple, having but little curve, and his tables, of extreme daintiness, had tapering legs. Sheraton made many writing desks and was originator of the highly esteemed "kidney" shape. An absence of projecting ornaments is an essential feature of the Sheraton style. The most of his lines were straight, and he never used short, sharp curves, but whenever he employed curved lines, they were invariably long sweeps.

He was enticed by the popular demand into an attempt at the Empire style. His production in this vogue, however, remains to attest its utter failure.

Louis XIV Period, 1643-1715—This period has never been surpassed for supreme luxury and studied magnificence. It was during this time that the celebrated palace of Versailles was built, with its waterworks, statues, groves, galleries, pictures and extravagant furnishings. This cost the King a fortune, as the furniture alone, not including either pictures or tapestries, amounted to 13,000,000 livres (\$2,535,000).

No period of decorative art has ever approached the magnificence and richness of the Louis XIV period. Not only the wealthy, but the middle class, indulged in the sumptuous furnishings and rich interiors. Early in the reign of Louis XIV, in the seventeenth century, there was founded a royal academy of artists and workers, domiciled in the Louvre, at Paris, where they were maintained at national expense. Boulle (or Buhl) was one who was selected for an academician, and he gathered together a devoted band of followers, including his own sons. Under his direction the Louis XIV style was formulated. Furniture was fashioned in a combination of curved and straight lines. The sides of large pieces were swelled outward, legs were

curved, chairs were of ample size and comfort and gilding was freely used to add to the richness of the massive carving. Elaborate inlays were characteristic, executed in metal or tortoise shell in floral patterns, with mounts of gilded brass and ormolu. Tables had running border patterns, the egg-and-dart, the acanthus and the laurel being units most frequently employed. It is for the establishment of the famous factories for the manufacture of elegant tapestries that this reign is chiefly known. In 1677 Colbert, the Minister of Finance, persuaded Louis XIV to buy the factory owned by a family named Gobelins, with the celebrated painter Le Brun at its head. The Aubusson factories were also established, and the products of Gobelins and Aubusson have ever since been famous for their beauty and artistic merit.

Old colors predominated, but the yellowish pink hue of dawn, called Aurora, Flame color, Flesh color and Amaranth, a purplish red, such as occurs in common flowers, were seen in sumptuous brocades and damasks, manufactured in Lyons, Genoa and Flanders, and were used to line the walls, for covering the seats and draping the great beds.

Louis XV Period, 1715-1774—In this period of Louis XV we find a continuation of the extravagance of Louis XIV. Speculation was rife, and it was a period of much inflated wealth. Fabulous sums were paid for the best work of all kinds that artists could produce. Nothing in decorative art was too magnifi-

cent to cater to the comfort, convenience and taste of the rich.

J. A. Meissonier and Boucher were the two great masters who fitted and molded their talents to the vulgar fancies of their monarch.

Boucher was a great painter, and won great praise from the King for his voluptuous and often almost indecent creations.

The rococo of Meissonier, which he created and matured in the service and pleasure of the King, is the most intricate and extravagantly ornate decorative vogue ever conceived. Its wonderful shell and rock-like sweeps and flaring curves, filled and crowded with leaf and flower motifs, is graceful, to say the least, and fulfils its intention, a profound appearance of elegance.

In this period the slender chair legs had graceful curves, in fact, the technique of the curve was reduced to a fine art, while the frames became decorative borders for panels of the richest tapestry, brocade or damask. One has no difficulty in recognizing examples of Louis XV furniture, in which the ever present curve is a most distinct characteristic.

At this time there flourished the Martin family, originally coach painters, who invented the famous lacquer ever since known as "Vernis-Martin."

Louis XVI Period, 1774-1793—Louis XVI was a grandson of Louis XV, and succeeded him as King of France in 1774. The change in styles from Louis

XV to Louis XVI was not a sudden one. During the latter part of the reign of Louis XV there was a natural reaction to the chaste, following a period of excessive ornamentation. The most important feature of this change was the introduction of straight and geometrically curved lines in place of the more freehand curves of the rococo.

Louis XV was the most dissipated and spendthrift king the world has even known. With him there was absolutely no thought of the morrow; his court was extravagant to the highest degree. "After me the deluge," he said, and the French revolution which followed in 1792 was the harvest of the whirlwind sown by Louis XV.

Louis XVI style is due to a desperate attempt on the part of the court to return to a simple style of living after the debauchery and extravagance of the previous reign. Artistically considered, Louis XVI style is a modification of the Greek. The Greek details used in the architecture are necessarily light in order not to overpower the soft colors of the walls and ceilings, or to stifle the designs in the fabrics under so much architectural dignity.

The modest taste of Marie Antoinette, the beautiful wife of the King, was a powerful influence for the return to the classic as a reaction from the preceding reign. Her chief furniture and cabinet-maker was Reisener, who worked for her for twenty years.

The unearthing of Herculaneum and Pompeii earlier in the century also stimulated the use of the Greek and classic models. Artists and architects turned from irregular panels and scrolls in the rococo to angular panels, simple molding and broken corners, the whole following out rectangular forms and fine embellishments. Fluting in various forms was used, together with tapering legs and bronze mounts.

Louis XVI is a style most suitable for home life because of its simplicity, and yet it is superb enough to furnish the drawing-rooms of a royal palace. With a selection of brocade damask, brocatelle or velours, it can be brought in price within the reach of the average purse. On the other hand, by the selection of genuine hand-woven Aubussons and Gobelins tapestries, the expense is very considerably increased.

Soft colors are the favorite in this style in America, but crimson, bright yellow and other brilliant colors were used in draperies during this period in France. The most harmonious colors for this period are white and yellow, crimson and gold, or green and white and gold.

First Empire Period, 1799-1820—In this period classic forms were revived, with ornaments modified by Grecian art. It was an expression of Napoleon's personal taste, and excluded all remembrances of former royalty. The French revolution having destroyed the fittings and decorations in the old palaces, this new style was originated to be in every way different from the preceding luxury. The Empire style was straight and severe, but rich and dignified. The massive carv-

ings were structural, and mere applied decoration was wholly omitted. This style is the best union of ancient Greek beauty with modern comfort that is known. Mahogany, with gilt and bronze mounts, was largely used. The decorative units, copied as they were from antique models, included the laurel wreath, fasces and eagle.

Colonial Period, 1620-1787—Colonial furnishings are merely a reproduction of the contemporary furnishings of the mother country modified in the earlier periods by the simple tastes of the early colonists. In the early years of the settlement of America, Englishmade furniture was scarce and confined to the turned wood type which was known as the Jacobean. Colonial style developed its best qualities during the latter part of the eighteenth century. It was a picturesque period full of charming variety.

None of the seventeenth century furniture was mahogany, a wood that did not appear in England or America until the eighteenth century. From about this period we date the Colonial tendencies toward a better class of furniture and furnishings, for the Colonies had passed beyond the mere struggle for existence

and were prospering.

The history of Colonial furniture may be properly divided into several periods, as influenced from abroad; from Elizabeth to Queen Anne, 1600-1700, showing Elizabethan, Jacobean and Cromwellian influences; from Queen Anne to George III, 1700-1760, showing Dutch influence; the George III period, 17601800, showing the classic revival and the introduction of the French and Chinese character in design; and the concluding years of the George III period to 1820, showing that type known as the "English Empire." The earliest Colonial furnishings were influenced by the English and Dutch styles of the Elizabethan and Jacobean age. With the settlement of Virginia and Maryland and later settlements in New England much wealth came into America, and home furnishings were beautiful. In New Amsterdam, prior to 1674 when the English took control, there was also a great deal of wicker furniture, East Indian cabinets, ebony chairs and all that would naturally come with the East Indian trade, which the Dutch controlled.

While it is true that Colonial style developed its best qualities during the latter part of the eighteenth century, it is also true that the most interesting period was the latter part of the seventeenth century, when the carved and wainscoted chests, Flemish cane chairs, beautiful Spanish pieces, heavy oak cupboards, Indian ware and Dutch, Italian and Spanish curios were generally used. It was a picturesque period, full of charm and variety.

The Colonial style carried no carving; as a rule, its distinguishing mark being wide, polished surfaces, with symmetrical curved outlines. The Colonial sofa had cornucopias to form the curve of the arm, large animal claws for the feet and a graceful sweep to the back. An especial Colonial ornament was the pineapple or pomegranate. Bureaus and sideboards were

made with posts continued down to make feet. Sideboards had four posts across the front and the middle section was curved outward.

Post-Colonial Period—At the close of the American war of independence it is natural that there should have existed in the hearts of the American people a strong aversion to everything English, in domestic, as well as state affairs. Therefore, this influence, together with a sense of gratitude toward France for her aid in their great struggle, furnishes the chief motif in the birth of a new decorative style.

Whatever has been, or may be said, in praise or blame, whether with pride or indifference, we of America must needs claim it as our own. It had its conception in the noblest of American causes, and its development in the construction period of the new nation.

The original motif was French Empire, but so far removed is it from its origin, through the many changes in its natural development, that it became complete as a new and distinctive style in furniture. It was evolved in the Post-Colonial period, 1810 to 1827, and continued its supremacy for a period of about thirty years. It is known as the Post-Colonial style, and has recently been revived with great success. In its composition it presents a vigorous appearance in the ensemble of its characteristics, which chiefly include an unconventional contour, massive elements of construction, and the spectacular treatment of its surfaces.

L'Art Nouveau—L'Art Nouveau is a term given to a new school or design which had its birth about twenty years ago in Paris. This end-of-the-century style deliberately sets aside past traditions and returns to nature with complete originality as the guiding rule. It somewhat resembles Japanese art in its conventionalities of swirling clouds, rippling waters, buds and petals. The style is made up of lithe, plastic lines, and is a distinct revolt from the classic. It is recognized today as the most thoroughly original decorative art movement that France has seen since the creation of the rococo. This style as applied to furniture has been almost forgotten, however, owing to the fact that there is a greater demand for other styles that have a closer parallel with history.

Modern Mission Style—From the old Spanish regime in California, and its memory of Franciscan frairs, is descended the Mission style, with its flat, quaint, unadorned, plain and heavy construction. It is pleasing because of its oddity and satisfactory proportions, suggesting repose, comfort and suitability for modest homes. Oak, in its various dark finishes, is the wood used, with smooth upholstery of leather. This is not recommended for complete home furnishings, but is especially adaptable for living rooms, dining rooms and dens.

## CHAPTER VI

Kitchen-Stoves and Ranges-In homes where they are used, the coal range and the heating stove are very important factors. The consumer probably has more difficult experience in getting good service from a range or a heating stove than from all other of the home furnishings. Why will a certain make of range fail to bake, for instance, in one kitchen, when exactly the same model will give the very best of service in another? Why will the grates of one last for years without renewing, and in the other last but a few weeks? Why will a baseburner, that one family will testify consumed but four tons of coal during a winter to heat a five-room house, require a neighbor, with the same model to burn twice as much and then hardly keep three rooms warm? Such experiences, and many others, are exactly what occur every day. The reason why many persons are unfortunate in obtaining good service from the cooking or heating stove is oftentimes not the fault of the stove in any way, but that of the operator and sometimes that of defective flues.

A range that weighs four hundred pounds will be a better range than one which weighs but three hundred pounds. Because of its weight it will stand harder service. The ovens are built better, as is the top of the stove. For this reason, it is difficult to select a stove from pictures. Some stove foundries put out a fine looking, large stove for an attractively low price, but when used it will soon be found to be deficient in weight and quality. It is necessary to consider one's requirements thoroughly, and be sure to see the stove, or one like it, before buying.

The malleable steel range is higher priced than the all-steel and cast iron ranges, on account of the durability that is insured by the usage of malleable parts. All frames of a malleable range and all doors, tops, top plates, covers, centers, etc., are made of malleable iron, consequently will not break. This is a valuable point in their favor.

The steel and cast ranges or cook stoves are used more than the malleable, owing to the lower cost, and with the proper care should last many years.

It is well to buy a range with a loose fitting top, for in case of a piece of the top warping or burning out, it can be replaced by simply setting in a new piece. In the riveted top, it usually takes a high-priced mechanic many hours to replace the piece. A pouch feed door for the supplying of coal without removing the lids from the stove is important. Due consideration should be given the size of top desired, and whether there are four or six lids. An enameled iron reservoir seems to give longer service than a copper reservoir. Stoves with smooth finished nickeling seem to be growing in demand, and it should be remembered that the

fanciest and brightest trimmed stove is not always the best.

Much care should be exercised in the setting up of a stove or range. In ninety-nine cases out of a hundred where the stove is blamed for not baking, etc., the trouble is caused by the setting up, or by the flues of the house.

Directions for Setting up Stoves and Ranges—For Chimney—The first essential for setting up a range or cook stove is to examine the chimney and see that it has sufficient flue space and is of proper height. It is the chimney alone that furnishes the draft and not the stove, as many suppose, and it must, therefore, be of good size and clear of all obstructions in order to furnish draft enough to operate the stove perfectly.

The flue should be round or square, at least eight inches in diameter, and as high as the main part of the house or any wall near it. If not high enough, it should be extended with brick, if possible, but if a sheet-iron cap is found necessary, have the pipe at least eight inches in diameter and see that it fits the chimney tight. If any air is admitted around the top of the chimney, it will decrease the draft, rather than help it. The chimney should be straight, not angular, should have no bends or turns, should be even or flat at the top, and all chinks or off-sets should be well filled with mortar. There should never be two openings into it unless opposite each other. The flue that is used for a stove should not be used for ventilating the

cellar, and all openings into it, above or below, should be tightly closed. A new or green chimney will not have a perfect draft until it is thoroughly dry, which requires from two to four weeks time.

For Pipe—Use as few joints of pipe and elbows as possible. See that they fit tightly together, and into the chimney and onto the collar of the stove properly. Always have the pipe and the opening into the chimney full size of the collar on the stove. If the stove designer had needed a smaller collar he would have specified it. See that the pipe is not telescoped at the elbow. After all of these parts are properly adjusted and well arranged, one should open the direct draft damper and see if a good fire in the stove can be had, together with a strong draft. If the fire will not burn well the trouble is not in the stove but above it. If the fire does burn well on the above direct draft, close the oven damper and see if the oven will heat and bake well; if not, examine the flues and damper and see:

- 1. That all the flues are open and clear. In cleaning flues many do not clean all the flues and frequently push soot and ashes into back corners and in that way stop them up.
- 2. Examine all of the dampers. It is necessary to know how they operate so they may not be open when they should be closed.

It is possible for the draft of the chimney to be so strong that it will carry the heat so rapidly around the oven that it can not be absorbed by the plates, and the oven will fail to heat sufficiently to bake. Every stove should have a damper in the pipe which will regulate this trouble.

It is not best to set two stoves to the same flue, or to use a T joint, if it can possibly be prevented.

For Stove—See that all the flues are open and clean. See that damper and flue stops are in place and closed tightly, being very sure that the one back of the ash pan is very tight.

Directions for Operating-Heat up slowly the first time. Fill the reservoir before starting fire. Do not fill fire box above the top of the linings at any time, as more fire walls are burned out from this cause than any other. Shake the grate often and keep free from cinders and ashes. Do not let the lower front door stand open, as enough draft can be obtained through the draft register. When baking, the register in the feed door should be kept closed in order to thoroughly heat the air by sending it through the fire before sending it around the oven. Do not operate the stove with the direct damper open, as too much fuel is used and the fire burns too rapidly. Empty the ash pan at least once a day. Do not set leaky vessels or spill cold water on the stove, as there is danger of cracking the top. Do not let the reservoir covers stand open, or set a hot flat iron on the hearth or shelves, as there is danger of cracking them.

If soot hangs to the lids, it is evidence of a poor draft, or that the stove needs cleaning out.

If soft coal is used have the coal dry and well

broken. Do not put much fuel on the fire at a time, and clean the flues out often and scrape them, both top and bottom.

If hard coal is used, use range size. Fine coal will not do. Shake the grate often and keep the clinkers and dead coals out of the ends and corners of the fire box. Keep fire box filled up even with the top of fire linings, only.

If wood is used always use the wood linings that are made for the stove, and do not cut the wood too long.

Many will be surprised to know that every piece of a range has a name. In ordering repairs, it is necessary to give the name and number of the range, which is usually to be found near one back top corner. State if "square" or "reservoir" style. Describe the pieces wanted if possible, using the technical names which can be procured from any merchant who handles stoves.

Always instruct whether to ship repairs by freight or express, the latter being quicker, but doubly expensive.

Baseburners—Many thousand baseburners are sold every year, and many of them prove unsatisfactory, not altogether from faults in the stove, but from various causes, such as poorly constructed flues, poor grade of coal used, or very often, poor management in regulating the stove. Baseburners get their name from the way they distribute the heat through the base, up and into the room by special flues in the stove. The

prospective purchaser should examine the special flues for heating the base so he may understand their principles and also that he may know how to take proper care of the stove. In buying any kind of a heating stove the first thing to be taken into consideration is the size and number of rooms to be heated. Include in this consideration height of ceilings, and number of windows and doors in the rooms. Where there are children running in and out, or where there is a large family, it will take more heat units to bring about the required temperature than will be required in a place where there are less people to open and close doors. This helps to account for the many different experiences various families have with exactly the same kind of a stove.

With a baseburner, the largest size will curtail the coal bill, as it takes practically no more coal to run a large stove than it does to feed a small one. A small stove will not do the work of a large one, as it has not the capacity, and will radiate only the amount of heat which its capacity will allow. On the other hand, by proper adjustment of the dampers, a small amount of heat can be obtained from a large stove, and when more heat is wanted, the stove, being large, can provide it.

The more nickel-plating a stove has the more it will cost, and this is not essential to the making of a good heating stove. In order to give good service nickel-plating should be done on copper, otherwise it may rust and give much trouble.

In buying a baseburner a large heavy fire bowl with heavy grates should be well considered. The stove should be constructed so that by removing a few bolts and the front doors the bowl may be taken out without tearing the stove to pieces. This is advantageous when a bowl cracks or wears out, as most of them will do in time, with no discredit to the stove.

Some baseburners have small openings near the top of the magazine, as an escape for the carbonic gas that comes from the coal, allowing it to pass through the fire and flues of the stove and out the chimney, rather than into the room, thus endangering life by suffocation.

To start a baseburner, charcoal is valuable, as it does not blacken the mica doors, as does kindling or wood. When a baseburner is once started, it should not go out until it is taken down for the season.

Electric Cookers—In a few years most cooking will be done by electricity, as electric cook stoves are in great demand, and but few manufactured. These few will no doubt be improved and many others made, as they are in their infancy. The utility of such a system can be easily seen, as a switch which can be thrown on at any given time is governed by an alarm clock set for the occasion, and the cooking begins before the housewife arises in the morning or returns in the afternoon, and at an expense little greater than that of burning an incandescent lamp for the same length of time. When a meal has been cooked the required time, automatic appliances turn off the current, thus

insuring no waste. This and many other electric devices go a great way toward solving the household economic problem.

Gas Stores—Gas stoves should be of as sanitary a type as possible, containing top burners that can be taken apart for cleaning. Many stoves have transparent oven doors that enable one to see the inside of the oven when cooking, thereby saving the heat and eliminating the rush of cold air in the oven when opening the doors. The flame can also be seen and adjusted by regulating the valves. The price of a stove with an elevated oven is somewhat more than one with a low oven, but it will save labor on the part of the housewife and is highly recommended, although caution should be exercised, as such tops have a tendency to throw the heat of the lower flames forward, sometimes burning the face or setting the clothing ablaze, especially where the oven extends over the whole top of the stove.

An eighteen-inch oven is the most practical, if one expects to do much baking, as in this size four nine-inch pie pans can be placed at one time. If an oven measures but sixteen inches it will contain but two nine-inch pans and at the same time use nearly as much gas as the larger size.

After using a gas stove for baking it is well to leave the oven door open for a short time to allow ventilation, thus preventing sweat and rust. To keep the range black, wring out a sponge kept for the purpose and rub well with soap. Wash the stove when it is not warm, and thus keep it black and free from grease spots. Use matches freely rather than allow the flame to burn continuously, thereby wasting gas. Turn off the gas the moment it is not needed.

Some gas stoves require several minutes of heating before placing the pastries in the oven. With others the oven can be filled before lighting the gas. The latter will cause a great saving in the consumption of gas in a month, if there is much baking to be done.

Stoves without pilot lighters may be had, and will help curtail the gas bill, as extra lighters consume extra gas.

Kitchen Cabinet—The development of the kitchen cabinet is due, to some extent, to the scarcity of house maids, and has done much to lessen the kitchen drudgery for the housewife. A good kitchen cabinet well equipped will lessen the purchase of kitchen supplies. It contains flour, sugar, and salt bins, a flour sifter and tray, glass spice cans, cooling cupboards, with bread and cake boxes, pan racks, bread board, large storage cupboard, cutlery drawer, grocery lists, calendars, etc., a pantry within itself. This, in connection with a cooking range, is about all that is really necessary in a kitchen.

A cabinet with a flour bin in the top is the most practical, for the reason that as fast as new flour is turned into the top of the bin, the old flour is being sifted out of the bottom. If the flour bin is in the base of the cabinet the bin has to be removed before the flour is poured in to insure perfect satitation.

An upper flour bin must be of the kind that tilts forward or drops down to be filled, or one that can be removed for cleaning, etc.

The flour sifter in the bottom of the flour bin must of necessity be easily removed as it will wear out and must be replaced.

A full sliding aluminum top, on the base, is desirable, as it insures a larger working surface when it is pulled out or extended, and is the most sanitary. Avoid the partially sliding top, as the water will run down between the sliding top and the top of the cabinet base, and sometimes bind the top in such a manner that it can not be pulled out. Metal that bends over the edge of the work table is preferable to the metal that is fastened to the edge of the top with wooden strips.

There should be a partition either of wood or heavy pasteboard immediately under the top, to prevent water from dropping into the lower compartments.

See that the locks on the doors work from the outside. This insures a door from being locked on the inside and failing to work, and may save a lot of trouble.

Cabinets provided with sliding doors and those of the "open" top design with doors which open high above the working table seem to be growing in demand. If the doors are low and must be opened when the table is in use, it will necessitate the removal of all articles on the working table—hence the advantage of the doors which are hung high above the table top.

Examine the hinges of the doors to see that they are sag proof, especially if the sugar bin is fastened to the door, as the weight may eventually sag the door.

Owing to a lack of wall space it is sometimes necessary to buy a cabinet base only, as it may have to be placed under a window. Such a base should contain a flour bin.

Cabinets of "sanitary leg" type with copper ferrules and easy running casters are the most practical.

There are also hanging wall cabinets which have no bases and which contain only such apartments as are found in a cabinet top. Very few of these are used.

A Practical Suggestion—Those who contemplate building a home should refrain from building a stationary cabinet in the kitchen. The main reason is that during certain times of the year the kitchens are sometimes visited by small ants. This does not reflect upon the housekeeper, as ants infest the best of homes and are almost impossible to guard against. They not only go to the kitchen, but to all parts of the house. If a cabinet is portable, one can keep them from entering by placing the legs of the cabinet in dishes filled with poison. There are special casters made with a small flat cup above the rollers, which can be put in the legs of a cabinet to replace the regular caster. These small cups filled with powdered borax or poison will keep the ants out of the cabinet.

A stationary cabinet may be modern today, but a few years hence be out of date and not easily changed.

The idea of using a built-in cabinet that some one has used in a rented apartment is not always satisfactory to the newcomer.

Metal cabinets are growing in demand and no doubt will contribute their share to the sanitary conditions of the day, although they are harder to keep clean than at first thought.

Kitchen Stools—One of the most practical things to be used in a kitchen is a stool, twenty-four inches high, with a revolving seat. They are inexpensive and will be of great service to the housewife.

Kitchen Tables—Many small families serve their lunches in the kitchen. There are many tables used for this purpose, some with drop leaves and others with round tops, thirty-six inches across, which will extend to five feet in length with leaves to fit in. These can also be used in very small dining-rooms. Some kitchen cabinets can be had with an extra drop leaf that may be used for the same purpose.

Refrigerators—Their Main Elements and Factors—Heat, cold, and gravity are the three elements of refrigeration. By the simple force of gravity the cold air falls to the lowest point in the refrigerator, entering the provision compartment and displacing the lighter air which goes through the air flues into the top of the ice chamber. When it comes in contact with the ice and metal under it all the moisture and impurities are condensed and pass off through the drip pipe. This dry, pure air then passes into the provision chamber, again forcing the air into the ice

chamber to be again relieved from its impurities, continuing the cycle and thereby causing a positive circulation of pure, cold, dry air, the three necessary conditions for the preservation of perishable articles, There are many refrigerators on the market which serve no better than a common box, in that they lack the most important factor of a good refrigerator, namely "insulation." A good refrigerator should keep, not ice, but food, by having a sufficiently low temperature by the aid of ice to restrain (though it is almost impossible to kill) the bacteria that develop in a warm temperature. It is insulation in the refrigerator that keeps this temperature low, by preventing the hot air from entering, and coming in contact with the provisions.

Insulation and circulation are two most important factors in refrigeration, for without one the other can not exist.

The insulating materials can not be seen, as they are in the walls of a refrigerator, and for this reason it is difficult for the inexperienced to know a good refrigerator.

There are many insulating materials used in the manufacturing of refrigerators. While dead air is the very best non-conductor of heat known, it is very difficult to get dead air space, and materials that are most commonly used are cork, asbestos fibre, charcoal sheathing, felt and mineral wool. Loose charcoal is good, but will absorb moisture, and dryness is absolutely necessary for the best of refrigeration.

Appearances of a refrigerator have no bearing on its merits, as some of the least attractive ones are the best.

The most economical and efficient refrigeration occurs when the temperature of a refrigerator is below sixty degrees. The placing of provisions therein raises the temperature in proportion to the quantity, as do also the numerous openings of the doors, admitting warm air.

There is no economy in buying small refrigerators. Many a person has purchased a small one only to be disappointed in its capacity, to soon discard it and buy a larger one.

The price of a refrigerator varies somewhat as to the style. For instance, a refrigerator with three front doors will cost more than one with but two front doors. The interior construction must be considered when comparing prices.

Porcelain and glass-lined interiors are best for the provision chambers, although a good hard non-rust-able metal is practical for the ice chamber.

See that the interior of a refrigerator is as free from corners and joints as possible, so that it can be easily cleaned.

A front door to the ice chamber allows the top of the refrigerator to serve as a shelf. This style can sometimes be placed under a shelf.

Some refrigerators are made with a front and back door. The idea is to place the back of the refriger-

ator to a window so that the ice can be put into the ice chamber from the outside of the house.

Care of a Refrigerator—Like a stove, a refrigerator requires careful watching and particular care.

See that the refrigerator is carefully cleaned before using. Then see that the drip pipe on the bottom is kept closed, preventing the air, sewer gas, or insects from entering the ice chamber through this pipe. It is advisable to look well to this point and prevent the unnecessary melting and waste of ice. If the drip trap on the bottom of the box is automatic, it will need no further attention than an occasional wiping out with a cloth. The drain pipe in the provision chamber should be easily removed and should be cleaned often to prevent its becoming clogged with dirt, which would force waste water back into the provision chamber of the refrigerator and would damage the contents. In case the ice should be consumed at any time and the refrigerator become warm, all of its contents should be removed and the refrigerator thoroughly cleaned and allowed to stand from twelve to eighteen hours after the ice chamber is filled before any food is placed in the provision chamber. Wash the ice clean, fill the ice chamber and keep it as near full as possible all of the time. To buy fifteen or twenty pounds of ice for a box with a seventy-five or one hundred pound capacity is not economy, as ice wastes rapidly in small pieces, without producing the proper result. Ice is usually sold in fifty or one hundred pound pieces. It is well to buy a box which will hold at least ninety or one hundred pounds of ice. One can then buy fifty pounds of ice at a time and have room for the piece that is usually left from the previous purchase. In a box that contains but fifty pounds it is necessary to let the ice melt almost entirely in order to have room for a new fifty-pound piece. The larger the piece of ice, the longer it will take for it to melt, therefore one may as well buy a large refrigerator, and though more ice is necessary to start on, consideration should be given to the service that may be gained by the increased size of the provision chamber.

Never allow the doors to remain open longer than necessary, or to be left slightly ajar. Never place warm provisions in the refrigerator nor keep them in the ice chamber. With a good refrigerator, and following these instructions, satisfaction will be obtained.

The sweating of a refrigerator is usually due to an atmospheric condition, as is the sweating of a water pipe, and is no fault of the refrigerator or its contents.

Window Refrigerators—Window refrigerators are small metal or wooden boxes which fasten to the outside of a window and have a door which opens as the window is raised. They are accessable from the inside only, and are valuable as a cooling place in the time of year when it would be extravagance to buy ice.

Fireless Cookers-From an economical standpoint,

the fireless cookers or hay boxes, as they are sometimes called, are a great boon to the housewife, and more of them should be used, if for no other reason than to diminish the fuel expense. The principle of all fireless cookers is the same. They cook, not from any heat forces that are generated from within, as some people imagine, but are constructed in such a manner that when anything hot is closed within them, the temperature remains about the same for hours. This will apply to the cooling of articles, as well as heating, all due to the system of packing within the cooker.

The fireless cooker idea is not a new one, simply an old idea put into new clothes. We are told that the Germans formerly used their feather beds for the same purpose, and that a heated vessel placed in the center of a hay stack will bring the same result, except that in the fireless cooker the heated lids or radiators which are placed beneath and above the vessels help still more to prolong the cooking by absorbing and holding the heat. They are packed with various kinds of fillings, such as asbestos, mineral wools, etc., all known for their heat-retaining qualities.

There are many cookers in the market and each has some merit of construction not found in others, and covered usually by a patent right. Some have wood exteriors and some are of metal. One of the very essential things in buying a cooker is to get one which will hold the heat, which necessitates patent locking, tight fitting lids; for that reason a metal construction exterior is recommended, as the moisture

from the heat can not easily warp the lids or cause them to pull apart at the joints, thereby opening a way for the heat to escape.

Cookers are made with from one to three or four compartments and some have compartments with double or triplicate pails, enabling three things to be cooked at the same time in one compartment over one burner. They are usually equipped with pure aluminum cooking utensils which are rust proof and guaranteed.

Every kitchen should have a fireless cooker, and the amount expended for one is a small matter when the labor, time and fuel-saving is considered, besides giving people a change in diet from fried foods.

Most reliable cookers may be had on a thirty days' trial, and thus all defects which may possibly arise from poor workmanship will be exposed, enabling one to thoroughly test the cooker before buying.

## CHAPTER VII

Dining Room—Modern Finishes—The dining room is one of the most important rooms in the house and should be treated with much thought and care. The popular fumed oak finish is very practical and is growing in favor daily, although the early English is a good finish, as is also the beautiful flaked quartered golden oak. With the exception of the several mahogany finishes, these three just named are practically all that go into the modern dining room. The darker finishes, early English and fumed oak, are mostly used in the straight line effects such as arts and crafts or so-called mission lines. The golden oak finishes at present run to colonial and claw foot designs, and will no doubt always be staple

In mahogany, the period furniture designs predominate, with the colonial in the lead, while the Sheraton is a close second. English ideas present suits in the stained oaks and are growing in demand. Any of these make a handsome setting for a room.

Dining Tables—When planning for the dining table, be sure the size of the table is known before buying the table linen. The size of the dining room must be considered before one can determine the size of table wanted. Round pedestal tables measuring

forty-eight or fifty-four inches in diameter when closed, are most in demand. Such tables are provided with pedestal locks which allow an extension of the top to six feet without pulling the base of the table apart. In the period styles a great many leg tables are used. The table most in demand is that which measures eight feet when extended. Tables can be had in lengths up to and including twelve feet. Some are so made that the tops may be easily removed in halves, a nice feature when moving. Metal pins are best for the leaves or fillers, as they are stronger and more secure than wooden pins, and overcome the fault of the leaves binding and the edges splitting when placed next to and adjoining each other. It is sometimes necessary to leave one of the fillers or leaves in the table, and at a little extra cost, leaves may be had with small aprons on the end which drop and continue the rim of the table, in which the unsightly break ordinarily appears. The finer tables usually have these features, which prove a valuable asset when doilies are used

Table Pads—Every table should have a table pad to go under the cloth, to prevent marring the top by hot dishes or by the accidental spilling of liquids. To select a table mat is no easy problem, as there are about fifty different kinds of pads on the market. Asbestos table pads are the most numerous and are very satisfactory. Asbestos will, however, absorb moisture and consequently will hold any liquid which might be

spilled on the table. Such pads are liable to stick to the table when anything hot is placed on them, and especially so in damp weather, as they absorb moisture. Although asbestos is fireproof, it will contain and hold heat.

Cork is the greatest insulator of heat known. The next is felt, made from hemp straw. After that comes the "wool felt," which in most table pads is used with a liner of asbestos.

Buy a table pad which is liquid proof over the entire surface and at the joints, made so by an oil cloth or imitation leather top. This kind can be washed, which is absolutely essential to cleanliness, and if anything is spilled it will not ruin the beautifully finished table by going through the mat. Sections of mats to cover the leaves can be procured, in case a leaf or two is necessary to secure a greater length. They also help to produce a perfectly even surface.

Buffets and China Cabinets—Occasionally sideboards and china cabinets are built in the dining room, but if it be necessary to buy such articles the following will be of value.

Buffets are preferable to sideboards.

When comparing prices it is very essential that every detail be taken into consideration. Consider the length of the case and the depth. If a case is fifty-four inches long it must necessarily cost more than one but forty-eight inches, providing they are of the same pattern. If the front and top are all quartered oak it

will cost more than a case with quartered oak front and a plain oak top. One built close to the floor must ordinarily cost more than one built high from the floor. Observe all dimensions of a case and all of the detail work, such as cross band veneering on the many obscure places; examine the locks and keys and see whether or not they are strong and of good size. The number of compartments and drawers will be another source of expense; count them and examine the interior to see whether or not the drawers are subdivided. Some buffets have loose silverware trays which rest in the drawers. Others have secret drawers, etc. The size of the mirror has much to do with the price, as has also the detail interior work, such as the refinishing of the drawer slides, etc. It is an easy matter to get a low-priced buffet which will fill certain wall space, but when superior workmanship is considered it must be paid for, and will return its value in service long after the other low-priced case has gone to pieces.

It is well to examine the feet of these cases, and especially of a china cabinet. See that they are very securely fastened, or a costly accident may occur after the dishes are in the case.

If a china cabinet has bent glass doors and end glasses, interior mirror backing, and glass shelves, the price will be much more than one with flat doors and ends, and no mirror backing, and no glass shelves. See that the china cabinet doors are dust proof by having the doors to fit over the casing. Many fail to consider the reasons for the cost, and may easily

misjudge the concern that sells the article as too high priced unless careful scrutiny is used.

Dishes.—Some hesitate in using their best dishes for every day. The under-glazed domestic ware would be sure to give practical service for daily use, as the glazing serves the same purpose as varnish on wood or lacquer on a bed, and preserves the decoration. Such sets will be found inexpensive.

Dining Chairs—A box seat dining chair is the best. Leather or expensive tapestries are the best coverings. Hand made rush seats are good also, but when they begin to break they are liable to tear the clothing. Tacked-on leather seats are not as expensive or as attractive as the slip-leather seat, but are very serviceable. The cane seats are very good but not as popular as in the past. The flat wood and cobbler seats are in the lower classes. The saddle wood seat is very popular in the medium grade of chairs and gets its name from its saddle-like appearance.

Dining chairs are usually sold in sets of six. A set of box seat chairs, however, usually contains five straight chairs and an arm chair, and where room affords this is recommended. People in small quarters sometimes make a mistake in buying but four chairs of a set, with the intention of buying the others later, and are sometimes disappointed, as the pattern is often obsolete when they are ready to buy. It is policy to buy the full set at a time. The extra chairs can be used in other parts of the house or stored away. If a full set is not desired it is better to buy a few odd

chairs which could be used temporarily, and later placed in another part of the house, when a full set is bought.

The polished finished chair is about ten to fifteen per cent. higher in price than the gloss finish. The gloss finish is simply a varnish applied with the brush, while the polish finish is hand rubbed.

In selecting a box seat chair, select one that is well braced under each corner of the seat, by screws and glue blocks, or braced inwardly. The back posts of a chair should run through to the floor and not terminate at the seat, if strength is desired. Bent back posts are better than sawed out posts and not so liable to break or work loose at the joints and squeak when the chair is pushed back with force, as when one throws the entire weight on the back legs by leaning In the medium grade chairs, a brace running from the back posts to the seats, adds wonderfully to the durability of the chair. If a chair is represented as oak, see that it is oak. Of all important things in a chair, the posts should be all oak to insure strength, as the first place for a chair to work loose is at the point where the seat joins the back posts, and when they weaken there it is almost impossible to properly repair them. For this reason elm is not a good wood for chair posts as it is too soft to hold screws securely. Spindle back chairs are not as comfortable as the slat or hanister back chairs. Chairs with the back post concealed behind a top banister make a better appearance than those exposing the full length of the post.

Stretchers running from post to post below the seat reinforce the chairs, although in a box seat chair there are not as many used as in the less expensive chairs, where the more there are used the better, owing to the inferior construction.

Bent wood chairs have their place in the dining room and are highly recommended. They are strong and light in weight. The different parts are made from wood that is steamed and bent and thoroughly dried, after which the parts are assembled. If made of oak, these chairs are very durable.

In matching up a complete suit in the higher grade of dining room furniture, many miscellaneous pieces may be had to match the suits exactly in material and finish, such as serving trays, tea wagons, muffin stands, candlestick holders, etc.

Chair Glides—Owing to the fact that chairs of all kinds are dragged more or less from place to place, and pushed around, they mar the floor or wear the carpet, this also being a strain on the chair. Every straight leg chair should be fitted with metal glides, which help in a great measure to overcome that difficulty, and the additional cost is hardly worth mentioning.

## CHAPTER VIII

Living Room—As time moves on the home and its furnishings must necessarily change. The building of new homes, at present, does away with the old fashioned parlor and now we have in its stead the living room, which is as large, usually, as the former old-fashioned double parlor. The best furniture of the home, the most comfortable and the handsomest, is for the living room, where the family gather, after a busy day or week, for pleasure and relaxation.

Many complete suites can be had for the living room, comprising tables, rockers, easy chairs, book-cases, desks, couches waste-baskets, and foot-stools. These suites run from six pieces up to twenty-five and thirty.

Rocking Chairs—The runners of some rockers are too short and consequently stop the motion too abruptly to be comfortable. The back, arms, cushions, etc., should all be the correct shape and height. It is very difficult to judge a rocker by looking at it. Some rockers are comfortable for some persons and not for others. Chairs may vary somewhat in the tilting position; for that reason it is best to sit in a chair before purchasing it, an advantage that can not be had when buying from a picture. If a rocker has a spring seat, notice the number of springs, whether five or seven or more. Turn up the rocker and look under the seat.

Notice the way they are fastened together and into the rocker seat.

The quality of upholstery should have careful consideration. Leather of first quality (see chapter on leather) is fine grained and very pliable; if second grade it will be coarser grained and not as pliable, and if of still lower grade it will be stiffer and very harsh to the touch. The last grade is not good at any price, and one should be very cautious in buying even the second grade.

Notice whether the runners are securely glued into the chair posts or whether they are fastened with nails or screws from the bottom. As strength is a vital consideration, see that the rear posts of a rocker run from the runners up through the seat and form a part of the back, and that the front posts run from the runners up through the seat and fasten into the arms in the front. Spindle back rockers are not as comfortable as are those with panel backs. Notice whether the arms of the rockers are fastened on with a screw through the back post and a couple of spindles running to the seat, or whether they are more substantially built by being jointed to the front post which runs from the rocker runner up to the arm, and see also that the arm is run into and flush with the back post. Large, high backed chairs and rockers make good living room furniture, and many Morris chairs are used in the living rooms, as well as the adjustable back kind, or the kind with the seat and back which work automatically The disappearing foot rest, which slides out and provides a

perfect rest for the feet and then slides back out of sight when not in use, is attached to many of these chairs. A newspaper basket which is sometimes used for sewing or smoking materials is often concealed in these foot rests. Many of the patent Morris chairs are very satisfactory and comfortable. In buying chairs of any kind the plain upholstered ones will save much labor for the housekeeper.

The large Turkish rockers which were so popular until recently are being displaced with the more attractive English styles with smaller loose cushion seats and backs.

Davenports—The most luxurious davenports are made with deep crucible springs, with many hand tied cords, over which is placed an abundance of tow and hair. Over this foundation they are upholstered. Many springs are used in the backs and in the ends, as well as in the seats of these davenports. The best of skilled labor is employed to make them as soft as possible, and yet so substantially built that they will wear for years. Relative to the upholstering on such goods it may be well to suggest that those desiring good furniture at a minimum cost will profit by purchasing such goods with the inexpensive covering, such as denim, and years later have the article upholstered in a better grade of covering. The idea is to get the initial investment in the structure and not in the covering. Davenports are made less expensive by using lower priced material and can be bought for almost any price. They are made in all of the grades of imitation leathers and soft goods, such as velours, plushes, tapestries, ets. The under construction can usually be seen by lifting up the end of the davenport. This may be troublesome but is really important. On most of the Turkish stationary davenports, however, the bottom is usually covered with a cambric.

Bed davenports are used a great deal in living rooms. They have the appearance of an ordinary davenport and can be easily converted into a bed. The automatic bed davenport lets the back down and necessitates the making of the bed on top of the davenport seat, or cushion. The most satisfactory bed davenport is the one with the spring and mattress on the inside and is independent of the outer cushions: in other words, an "inner bed." When wanted as a bed, the davenport is opened and the inner bed is always ready for use as it also contains the bedding. Such beds require no extra storing of bedding, although some contain the box below the seat, which can be used for storage. These beds are really comfortable and very practical, and some are very simple in construction

The closer the springs are placed the greater will be the strength of the davenport; consequently, take note of how many springs are used and see how they are fastened together and to the frame. Shake the ends of the davenport, thus testing them to see how rigid they are.

For lack of space in some rooms the regular length davenport is too large. Those desiring a short bed

davenport can find it. It opens with a jackknife motion and makes a regular sized bed when opened, and is highly recommended and is becoming popular.

Sanitary Couches—These are also in great demand. With a mattress and a couch cover they have the appearance of a regular couch and are very practical. They serve as a couch and, in an emergency, can be converted into a full size bed by simply raising each side to a level with the couch proper. Some are made with a back. Any of them, if well constructed, make a comfortable bed, and are inexpensive. There are various other makes of sanitary couches which open automatically into full sized beds and make more perfect beds although more expensive than the kind mentioned above.

Examine the casters of such couches. If they are riveted to the feet they can not be replaced as easily as a socket caster.

The life of such a couch depends on the way the fabric in the top is attached to the framework. Many small tempered coil springs should be the connecting links. In some instances there are but a few, while the better couches have many of these helicals. Under the fabric top and in the center will be found supports, sometimes two rows, sometimes more, the more the better.

Couches—Couches are frequently used in living rooms and are constructed much the same as davenports. The greater the width of a couch the more comfortable it will be. See that the feet of a couch or

davenport are large enough to securely retain the casters, and see that the blocks in which the casters fit are of such size that they will not be liable to break out. Notice how the couch legs are fastened on, with nail, thumbscrew or nut, or more securely blocked and glued.

Living Room Tables—Living room tables with round or oval tops are the most practical, although many people use a rectangular table, such as a library table

The circular, pedestal base tables, without a drawer, seem to be growing in demand, except where rooms are large enough for complete suites, in which case a davenport and rectangular table are sometimes placed back to back in the center of the room.

Straight Chairs—Many wood-seat chairs are used in a living room and these should be well braced and constructed.

Arts and Crafts Construction—Construction in living room furniture, especially in the arts and crafts lines, is a very important factor. In some of the most desirable chairs the stretchers, seat rails and back slats are mortised, tenoned and pinned. After this is done all of the parts of the chairs are clamped together under a high pressure which insures tight joints and adds necessary strength. Seating pieces have nicely fitted corner blocks which are glued and screwed, thus adding to their strength. These can be seen by upturning a chair or rocker. The arms of chairs are usually subjected to severe tests and

if the back slats are set in and pinned with wooden pins to the back post, a rigid setting is insured. Front chair posts with a tenon cut on them and mortised through the arms and securely fastened with a wooden pin driven through the arm and in the post, make a firm construction.

There are other structural devices which are ornamental as well as strong; for example, when the stretcher of the table is mortised through the leg and left projecting on the opposite side, held in place by a wooden pin driven through both leg and stretcher, or when a table stretcher is mortised through the leg and a wooden key is driven through the outside end. In some of the cheaper furniture the appearance may be the same, but close scrutiny will reveal the fact that the projection does not go through the table leg, but is a piece of wood bradded on. This is sometimes done on the arms of chairs to give the impression that the post goes through the arm.

Wherever surfaces are exposed, it is important to have as perfect glue joints as possible. The tongue and groove joints indicate a groove as cut into each piece and a strip of wood called a tongue is so placed that it enters both grooves when the pieces are joined and glued. The "V" joint is a groove cut into one piece and a ridge that fits the groove left on the other piece. They are clamped together in large glue presses.

#### CHAPTER IX

Bedroom—Modern Finishes—It has been well said that "nowadays people know the price of everything and the value of nothing." This may be especially applied to the selecting of bedroom furniture. Furniture has, at times, been quoted at exceedingly low prices, but such quotations mean very little. When construction is considered, it goes back to the old text, "What is really worth while, costs." Bedroom furniture receives hard service and should be purchased with extraordinary care.

Furniture for the bedroom is made of all woods, but those most popular are the golden oak, Circassian walnut, and mahogany, although white enamel and bird's-eye maple are used extensively, and in the mission designs the fumed oak again leads. An article that is properly enameled must receive many coats to insure durability; this the low grade enameled furniture lacks, owing to the fact that factories that make the low grade pieces have not the necessary facilities.

Dressers, etc.—Many points should be considered and carefully examined, in selecting a really good bedroom article, as even an experienced person may easily be mistaken. The features which should be most considered are often overlooked. When buying bedroom

goods such as a dresser, chiffonier, dressing table, or a princess dresser, be careful to take time to examine the interior construction as well as the exterior. Some case goods are made for show only, some are made for service, and some with both of these qualities combined. Modern case work, especially for the bedroom and dining room, is being made "dust proof" by means of an extra thin partition under each drawer. This prevents dust from accumulating in the drawers. Examine the drawer construction by pulling the drawers out of the case, also look at the slides of the drawers to see that they slide in and out without binding. A good case, well finished, will have the drawers mortised and tenoned and not merely tacked or dovetailed. All of these features do not necessarily mean that the drawer will not bind, as the very best furniture may at times give trouble along that line, especially during a rainy season.

The following hint may be valuable in case a drawer binds so it will not open. Obtain a brace and bit, and bore a hole through the back of the case at either end directly opposite the unruly drawer, using care to not bore into the drawer, since there are two or three inches between the back of the case and the drawer. Insert a round stick first in one hole, then the other, striking it gently with a hammer. The drawer will then be loosened and can be removed and planed off to fit more freely.

It might be here suggested that dents or bruises in

furniture may sometimes be drawn out by applying a piece of wet blotter, and letting it lie for several hours on the damaged spot.

In comparing values, consider the length and breadth of a case. If a case is all genuine quartered oak, it is worth more than one that has the top of quartered oak with plain sawed ends. If of solid mahogany, it will cost more than a case with a mahogany top and birch ends. If the interior is mahogany, it will cost more than one with an inside of some other wood. As stated before, the quality determines the price, always, and every piece of wood and nail and gluejoint is accounted for, whether of inferior material or of superior grades; and necessarily the better grades demand a greater price, but the greater length of service repays one for the additional cost.

If there is a mirror on the case which is being selected, consider its size and quality. Get a good American or French plate and do not get a mirror that will distort the reflection. Beveled edge mirrors cost more than those with plain edges. Pull the dresser away from the wall and examine the backing of the mirror and ascertain whether it is pasteboard or nicely finished wood. Some backings of mirrors are put on with small screws or nicely finished tacks, while others are tacked on with light brads, which are not as secure.

Notice whether the mirror frame is attached to the dresser standard by weak hinges, or whether it is fas-

tened by long screws with wooden or metal ends which go through the standard and into the mirror frame, thus insuring better strength and improved appearance.

Bedroom Desks—Ladies' desks for bedrooms are of two patterns, the drop lid and the open flat top desk with drawers for stationery on the top. These are very useful and add much to the appearance of a room.

Dressing Tables—Dressing tables with triplicate mirrors are not the most desirable unless the mirrors are very large, as with a hand mirror a person may be able to use the single mirrors as well or to even better advantage.

Cheval Mirrors—Cheval or full length dressing mirrors should be in every home where room and money will afford. The kind with a swivel or turning base is the most practical, affording a better angle with the light. Cheval mirrors vary in price in proportion to the height and width. Every woman who does her own sewing will find these a great help in the hanging or fitting of a skirt.

Bedroom Chairs—Bedroom chairs consist usually of a small low chair, a rocker, and an arm chair. Some prefer the low slipper chair and rocker, and others buy only a slipper chair and use it with their other chairs. The cane seat chairs are very serviceable and may be of enameled cane, which may be washed and cleaned with soap and water.

The low back dressing table chair, which is being sold with almost every dressing table, is made to slip under the dressing table and not mar the view of the table and its attractive mirror and nicely trimmed top. All bedroom chairs can be had in any of the popular woods.

In very large bedrooms, where floor space is of no particular value, the large chairs and rockers with slip-over cretonnes and fancy decorated slips may be used to match the bedspreads, curtains and decorative surroundings.

Plate Glass Tops—Plate glass tops are becoming popular, especially for bedroom furniture. These tops serve as a protection to the beautifully grained wood tops. They are also good for decorative purposes, as fancy cretonne or other materials, matching the wall papers and hangings, can be used under the glass on top of the dresser or bedroom piece, thus completing the color scheme.

In time, no doubt, all case goods for bedrooms will be furnished with glass tops. Glass tops for office desks are indispensable, as references, price list, etc., can be slipped under them and are always in view and at hand.

Casters—See that the casters are of good quality and notice how they are attached to the case or to the beds. If a wheel of a caster breaks, it may do many dollars' worth of damage to the carpet or floor, besides causing much annoyance. A drop of machine oil should be occasionally applied to casters and locks. It will prevent squeaking and will prolong their usefulness.

Locks—The locks are also an important feature.

They should work easily and be of sufficient size to be of service equal to the life of the case they are on.

Beds—The bed question is a major one in the furnishing of the home. There are many ideas as to what constitutes a good bed and many more as to what is good style, as beds are made of so many different materials and into many different shapes.

Iron beds of to-day are substantial and, from a sanitary standpoint, are very much better than the old-fashioned wooden beds with their panel work. A plain bed with very little filigree is the best to choose. However, if necessary to pay fifteen or twenty dollars for a bed, one could better buy a brass bed. In the higher grade beds the wooden beds are very much in demand, both in flat end beds and roll Napoleon beds, and especially the post beds. Brass beds will, no doubt, be in vogue for many years, as the demand is constantly increasing, but the demand is more for the satin, or dull, and the polet finish than for the bright or polish finish.

Brass Finishes—The "satin" finish is a dull brush finish all over the bed. In the "polet" finish the entire surface is given a satin finish with the exception of the pillar mounts, knobs and other trimmings, which are given a bright finish. This rich contrast makes the polet finish very popular. The "polished" or "bright" finish is polished or bright all over.

Brass Beds—There is perhaps nothing in the market that has been abused more than the selling of brass beds. Many manufacturers in order to make the brass bed an example of low price have forced the price down to meet the competition and the quality has been sacrificed to meet the price. In lowering the quality, then, the consumer has not been benefited one iota, neither has he been deceived, for he has not been charged the higher price, neither has he received the higher quality.

When considering the price of a bed the thing of most importance is the weight of brass used, whether it is of solid brass tubing or veneer tubing. But few know the difference. The solid brass tubing is, beyond question, the better, but is much higher priced. A solid brass tube bed is never advertised for \$9.98, as you, no doubt, have seen the veneer tube bed quoted. The lowest price on a plain solid brass tube bed of any kind is about \$25. Nevertheless, a very attractive, and indeed serviceable, bed can be purchased for \$25 in the veneered tubing.

A veneer tube bed is one in which the case tubing is bent to conform to the post of the bed, and can be detected by the seam at the back part of the brass posts and tubes.

These beds are very practical indeed, and are being brought out each year in more handsome designs. They will wear for years, with the proper care, and are not nearly as high in price as the solid brass bed.

It is impossible to bend the veneer casing, and, for that reason, where a bent piece is used on a bed as, for instance, a continuous head and foot, it must be a solid tubing and the price will be noticeably higher. The gauge of brass used in beds varies as to the size of the tubing used. The smaller the diameter of the tubing or fillers, the less the weight needed to make it substantial and strong.

In comparing brass beds it is necessary to consider the size of the posts, the number of rods or fillers used, their respective sizes, and whether of veneered or solid tubing.

A great many points in the construction of beds should be investigated. Some are fastened together by connections concealed in the tubes, and consequently, to learn just how a bed is fastened may not be possible, but some of the low-priced and inferior makes of beds are put together with poor interior connections, while the better ones have threaded heads with nuts, which are fastened securely by special tools, thus preventing them from growing weak and working loose.

Square tube beds cost more than round tube beds, for the reason that the raw material costs more and has to be drawn differently from the round tubing. It is more difficult to handle in all of its various stages of manufacture and the cost is increased in proportion.

Lacquers—The lacquer on brass beds has the same relation to brass as varnish has to wood. It protects the finish from air, etc. There has been much said recently relative to guaranteed lacquers, but as yet these lacquers have not been a complete success. Neither is it logical to believe they ever will be, owing to the fact that continual rubbing of brass will eventually remove all of the lacquer from any brass bed and

will also wear the surface through. When the lacquer is off of a bed, the finish will not last and nothing will renew it except to send the bed to a factory and have it go through the regular process of lacquering. This can be done to any brass bed at a reasonable cost. A good lacquer, therefore, is very essential.

Clothes Tree—Brass costumers or clothes racks are very practical for the bedroom and can be had with a cluster of many hooks, or a few hooks. Some are inexpensive, owing altogether to the weight of the brass and the number of hooks attached, and whether or not an umbrella rack is provided in connection with the costumer. When fitted with the latter, they are sometimes used in halls.

Wood costumers are much less expensive and serve the purpose as well and can be had in any finish to conform with the furniture used.

A Brass Cleanser—A receipt for a polish to clean brass beds is sometimes asked for. If possible keep the moist hands off of brass beds, by using a cloth when handling them. When the beds are fly-specked or need a little brightening, plain olive oil applied with a chamois or a soft cloth, and rubbed with dry chamois skin will prove very beneficial.

Wooden, Poster, and Bungalow Beds—Wood beds of the Napoleon style with veneer roll head and foot ends are very much in vogue, also the straight line square stock beds in all finishes.

Four poster beds, which are often copies of antique beds, in mahogany and imitation mahogany as well as the brass poster beds, are to be found in all well-selected stocks of furniture.

Bungalow beds with a low head and foot are growing in demand, in all finishes and materials.

The price of wood beds will vary according to the quality of material used. If a solid mahogany bed is desired it will be more expensive than a bed with posts of some other material, and panels of mahogany.

Twin Beds—Twin, or individual, beds are highly recommended, for the reason that no two people have the same temperament. Of two people sleeping together one is sure to be warmer than the other, therefore should not have the same weight of bed clothing, or one is stronger, physically, or probably more restless than the other.

As health is to have the most consideration at all stages of life, the price should not interfere. Twin beds will cost almost twice as much as one regular-sized bed. They come in different widths; some are three feet wide, but a better size is three feet six inches, or if the room will allow it, a bed four feet wide is still better.

The bed should be selected before the bed-clothes are purchased, otherwise the clothing may be too large, especially if a smaller bed is decided upon.

Bed Springs—Spring beds are now looked upon as a necessity in every home and still some are careless as to the selection of springs and mattresses. This carelessness is usually the result of lack of education as to

what really constitutes a good outfit. People sometimes buy fine bedroom furniture and then remember at the last moment that a spring and mattress are needed, and resort to almost any kind, regardless of the quality, to complete the bed. In some cases they do not even take the pains to look at the spring and mattress. These should be the most essential things on a bed and should be the first to be considered when buying a bedroom outfit. No man realizes the great advantage and comfort of a really good bed until he has one for himself. Eight out of twenty-four hours, or one-third of life, is spent in bed, and it is during this sleep that a person recreates the energy expended during the other sixteen hours. An old spring that sags in the center like a hammock, should be discarded and replaced by a good one. It is stated that kidney trouble is frequently caused by a sagging bedspring.

Many do not get a really comfortable spring until

they make their second or third purchase.

The best material used for bed springs is crucible spring steel. It is used in clocks and watch springs and in almost all springs that require elasticity and durability. Bessemer steel is softer, with a great deal less elasticity. In purchasing a spring made of crucible steel the best quality is secured.

There are many fabrics in bed springs, such as woven wire, link and slat fabric, all of which are good, but a really good crucible steel spiral spring will give as good satisfaction as anything that can be purchased.

Box Mattresses—Box mattresses are still being used,

but for the sake of sanitation the box spring with a removable padded top and slip cover that fastens to the frame of the spring is recommended by the best stores. The slip may be taken off and the padded top removed, and all easily cleaned and replaced. A cover made to slip over and lace around any bed spring affords an inexpensive and sanitary cover. The only means of cleaning a box spring mattress is to send it to a renovator, which is rather expensive.

Mattresses—So much can be said on this subject that whole books could be written regarding the construction and quality of mattresses. While showing the interior of a mattress to a customer a salesman had occasion to speak of the felting process through which the cotton passes in manufacturing mattresses. The customer was surprised to find the interior to be cotton, as she wanted a "felt" mattress and thought she would get a felted mattress resembling the wool felt she had seen in felt cloth. Thousands do not know the difference and will not admit it, and rather than be enlightened on the subject will usually buy what they think they can afford.

There are very few matttresses made that contain the best grade of cotton, for the reason that it is too expensive to put into mattresses and is used for the manufacture of cloth. After the best is selected, the balance called "linters" is collected and put into mattresses. Most mattresses, then, are made from linters.

After the cotton is taken from the cotton bolls, the

seed is removed from the fibre and there still adheres to the seed a short hairy fibre. This seed is reginned (usually at the cotton seed oil mills) and the short fibre cotton is known as "linters," and sells at about half the price of regular cotton, which accounts for the low price of cotton mattresses.

The seed from the upland or Sea Island cotton (the long fibre cotton) yields no linters. These seeds are known as bald or "Peterkin" seed.

After the linters are gathered they are assorted and the better grades go through a process termed "felting," producing fluffy layers as used in the cotton felt mattresses. The felt mattresses do not get lumpy or knot up as might those made of picked cotton that is put into a bag and sewed up.

There are good, bad and indifferent grades of linters, owing to the condition of the cotton when picked and the treatment of seed after ginning and before being reginned at the oil mill. Cotton seed heats and moulds when stored away, sometimes causing a disagreeable odor, which is noticeable in the lower and poorer grades of linters. Hence, the advisability of selecting good grades of linters in mattresses.

The bleaching of cotton is not especially advisable, as it tends to age the fibre since the natural oil of the cotton (which is from .25 to 1.25 per cent. weight of the fibre) is attacked and the real life of the fibre is removed, thus causing it to break and crumble more readily. There is, therefore, no advantage in bleach-

ing cotton except for the sake of appearance, and as the inner side of a mattress is not exposed while in use, it is not essential.

As said before, a good mattress and spring make the life of the bed, so be sure to get a good outfit; it will pay in the end.

Inferior Mattresses—The excelsior or husk mattress with a cheap ticking, and a light cotton padding on one side, called a "cotton top" mattress, is a low priced article. A little better grade is made with the same body, but with a slightly better grade of ticking, and both sides cotton, instead of only one side. This is called a "combination" or "reversible" mattress. Then there is the sea moss mattress and also the cheap wool mattress. Beware of this mattress as the filling is usually waste or rags or sweepings from the floors of clothing factories. All of these may be under special fancy names and special tickings, but the grade of the mattresses will be about the same in every store. If one owns such a mattress, it is not policy to send it to a renovator to be cleaned, as a new one will cost less, and likely the renovator would throw the old mattress away and send a new one in its place.

In judging cotton-felted mattresses the cotton with the longest fibre will give the greatest satisfaction.

Silk Floss Mattresses—Silk floss is playing an important part in the mattress business and those made of this material sell for about the same price as the better grade of felted mattresses. Silk floss is the product of the Kapok tree of the East and West Indies.

It is known botanically as the "Eriodendron anfractuosum," or species of the cotton tree and is related to the cotton plant. Owing to its oily nature, it is nonabsorbent, which makes it very healthful and especially practical in a wet season or climate. This flossy tree wool is very soft and fluffy, and makes light soft mattresses. A mattress of silk floss weighing but thirty pounds will be as thick as a felted mattress of cotton weighing forty-five pounds, a point that should appeal wonderfully to a person who has charge of the dressing of the beds. It is also used in life preservers, owing to its light weight and buoyancy.

In buying silk floss mattresses, beware of those made of part silk floss and part some other material. Other fibres and down from plants are used in mattress making, but silk floss is the best.

Hair Mattresses—Many prefer hair mattresses and claim that they are more healthful. However, a strong argument in favor of cotton felted and silk floss mattresses is that they are more healthful, since vegetable fibres can not carry diseases from dead animals. Hair mattresses are made from the hair of various animals such as hogs, and tails of cows and horses. The hair ranges in length from one inch to two feet, consequently the price of a hair mattress varies according to the quality of hair used and the number of pounds contained in the mattress. Often hair is mixed with a fibre and sold as an all hair mattress, but in time it will become lumpy and unsatisfactory. The best grade of hair goes through a process of sterilizing and purify-

ing before it goes into a mattress, therefore but little trouble ever arises from its use.

Mattress deception has been a common thing in the past, but we owe thanks to some state laws for this eradication which make it a criminal offense to offer mattresses for sale without a label truthfully defining the contents. Some mattresses are made so that the interior can be exposed, which is a splendid idea, thereby eliminating all chances of fraud.

Proper Care of Mattresses-That the life of a mattress depends largely on the care it has is not generally known. A mattress should be turned at least twice a week, and should be aired at least once a week. If the weather permits, it should be taken out of doors, and if not, it should be laid in front of a window, in the sunshine if possible, and where there is good ventilation. Besides this, a mattress should be beaten hard on both sides with a heavy club, free from corners or splinters. This will restore a mattress to practically the same condition that it was in when it came into your home. The cotton, or hair, or silk floss, will become springy again and really take on new life. Not so much can be done with the inferior grades of mattresses, although airing and sunshine will do them great good. Mattresses should be renovated every few years if they are in constant use. In time, body excretions, odors and dust will accumulate inside the mattress ticking and adhere to the cotton and a renovation is the only thing that will thoroughly clean it.

Pillows-It is impossible to see what is inside of a pillow tick when it is sewed; so one must place confidence in the merchant from whom pillows are purchased. Pillows of all descriptions are put on the market, from the commonest chicken quilled feather to the finest quilless goose down, made up in the cheapest tick to the finest art or linen tick. For the purpose of making a matched outfit, most mattress manufacturers make pillows to match the ticking used on the mattresses. Pillow factories have complete improved steam renovators through which all feathers are run before they are made into pillows, a process of stripping the feather of quills, another of assorting the feathers and down, to be made into different qualities of pillows. The light weight pillows are usually made of the finest goose down, which can be recognized by the great resiliency the pillows seem to have when one presses hard upon them. Those made of feathers are heavier, so that by comparing the weight one can usually judge the better from the cheaper grades. The quills of the feathers of the inferior pillows can be felt through the ticking.

It takes three pounds of feathers for each pillow. New goose feathers cost about fifty cents a pound; add to this the cost of ticking and labor, and the price alone will help you to judge the quality of a pillow.

Silk floss is not recommended for pillows as the floss has a tendency to separate, which is overcome in mattresses by the tufting process.

Cedar Chests-While cedar lined chests are not

exactly bedroom articles, they are most suitable to that room, although a pretty chest is an adornment to any room. Aside from its attractiveness, the cedar chest should be in every home, because it will protect the woolens and furs that are placed therein from the moth. If a moth is hatched or is locked up with a garment, however, it may live and thrive, but those on the outside will not bother the cedar. Moth eggs are very small and hard to detect and unless due precaution is taken they may be locked up with the article in which they have been deposited.

In comparing prices of cedar chests, examine the thickness of the stock used, also the construction.

The Auto Valet—The auto valet, chifforobe, or gentlemen's chiffonier, is an article that is almost indispensable in a bedroom, where closet room is limited. There are many styles of these and prices vary according to the style and make-up of the article. The majority are high priced, as they are usually made from mahogany, but some very nice inexpensive ones may be had. They contain a large compartment for hanging suits, besides a large drawer for shirts, collars, shoes, and other garments. Shaving mirrors, and umbrella and whisk broom racks are also fastened to the interior of some.

### CHAPTER X

Library—Modern Finishes—Library settings can be made of odd pieces or may be had in complete suites to match. If odd pieces are assembled, it is wise to select the plainer goods, such as colonial type furniture, as there is nothing more easily matched than colonial pieces.

The principal woods used in the construction of library furniture are golden, fumed, or early English finished oak, and mahogany, either in imitation or solid, in the dull finish. Fumed oak finish is becoming more popular for library furniture, because of the hard usage it will endure.

Library Chairs and Rockers—Large, easy rockers and chairs are very proper in this room and owing to the fact that these pieces get very hard wear, the purchaser should scrutinize carefully the grade of leather used in the chairs, and be sure that it is of superior quality.

Chairs with large plain seats and backs and no tufting are the only ones considered by those who wish to avoid extra dusting. Loose cushion effect, such as loose cushion seat with a loose portable back, is very much used. Platform rocking chairs which rock on a platform or on an under separate base, are recommended in heavy chairs. These are very com-

fortable, as they are regulated by the spring adjustment and can be adjusted to tilt or conform with the weight of the person who uses the chair.

Library Couches—Leather couches, finished in golden oak or mahogany, are sometimes used in libraries of large size. To get a couch that is really comfortable, one should select one that is well upholstered and has deep springs, well tied, with a heavy layer of hair and tow under the leather or upholstering, and with the tufts far apart. The small tufts are firmer, consequently not so soft. If a couch with a frame of an arts and crafts design is used, the plain leather cushions filled with felted cotton should be selected. Occasionally these have nothing beneath the cushions but slats, which make a rather solid couch.

Other arts and crafts couches have full automobile spring cushions, which are more in demand and are more practical than the felted cushions. If these are supplied with good crucible springs there is no reason why they should sag.

In the library a box couch is practical. One that has a spring top for regular couch service, and which has a roomy box beneath, to be used to contain garments, etc., is preferable. These are recommended for those who lack closet room, and they can be used in any room in the house.

Library Tables—Library tables are of all styles. Some have convenient magazine and book racks at the end and others have the large under shelf to contain the books, while some have both of these features.

One of the greatest improvements of recent years is the library table with the pull-out drawer desk. Such a table has many advantages; one is, that a drawer may be pulled out which has a lid upon which one may write without molesting the table lamp or books, or whatever may be on the table. The large drawer for the writing materials, etc., is accessible by simply raising the lid.

The metal glides or shoes for the bottom of library tables are more practical than casters, particularly where there are children, as the tables will not be so easily pushed about, thus sometimes avoiding a broken lamp or something even more valuable.

Bookcases—The old-fashioned bookcase, known as the combination bookcase, with the writing desk in connection and at one side, is practically out of use, the desk tables having solved the desk need, and the regular wall case or sectional case is used for the bookcase.

There are many makes of sectional bookcases on the market and these are rapidly taking the place of the wall or shelf cases because they economize space. They are very practical, as enough cases can be obtained to contain the desired number of books, and as the library increases more cases can be added. They can be fitted with a desk which serves a better purpose than the combination bookcase desk, on account of the valuable length of the sectional units. These cases are easily handled and each section may be transferred to any part of the house without removing

the books. This feature has been the means of saving several valuable libraries in time of fire.

The most important thing to consider in buying sectional bookcases is whether or not the factory will continue to manufacture the case. It would not be economy to purchase a case, even at a low price, if, when one wanted to enlarge the library, a duplicate case could not be obtained. The next consideration is the construction. See that the doors slide perfectly free, and that the case is dust-proof, as these are very important. Examine the backs of the cases and the ends to be sure that they will hold up under the weight of the books to be placed in them, as it is this strain which will soon expose a cheaply constructed case.

The bookcase is a necessary accessory to the library, as without it valuable books would soon fall to pieces. The triple and double glass door cases are extensively used, as are also the single glass door cases. In a double or triple case, it is well to have a partition from the bottom to the top, between the doors. When loaded with books, these partitions help to reinforce the cases. The shelves will not be so apt to sag when loaded with books, as where they run entirely across the case. See that the doors are dust-proof, by lapping over the center posts or over each other, and that they have good locks and hinges. Many bookcases have guides on the doors to prevent them from being opened too far and causing the hinges to break.

In long bookcases it is necessary to have an extra leg support under the center, owing to the great weight and strain they are subject to, thus preventing the case from sagging.

### CHAPTER XI

Parlor—Avoid the flashy, pressed or carved parlor furniture, as everything in good taste tends to the plainer and more substantial lines. Select artistic frames in mahogany or imitation mahogany or golden oak. The three-piece parlor suite with a few pieces to fill in, such as corner and Roman or odd chairs, are often suggested. The parlor table with a lamp or electric gas portable still holds its place.

The principle to bear in mind in furnishing a parlor, is that the furniture should have strength as well as artistic character. By lifting a piece from the floor or tilting it back and looking at the under construction, the post connections, as previously set forth, may be tested or examined. Turned posts used in chairs and settees must of necessity be firm, owing to the weight they must carry. Examine the spring construction as well as the covering of the seats. Instead of leather, silk plush and tapestry coverings are mostly used in this room.

Hall—Open halls and stairways are popular in new homes. In furnishing the small hall your dealer will suggest the hall tree, with the umbrella rack attached, the box in the base for rubbers, the long glass and the hooks for the hanging of garments. The hall mirror which hangs on the wall, with a separate seat under it, is becoming the popular thing. This seat usu-

ally has a lid over the box compartment for the rubbers. The great advantage of the two separate pieces is that the lower part may be moved without so much risk of breaking the mirror. Moreover, the mirror may be hung at a more convenient place than immediately over the seat. Hall furniture may be had in all finishes.

There is also the beautiful colonial console table with a panel wood or mirror back, with a large mirror hanging independently, but close above, thus giving the appearance of a one-piece article.

Full length mirrors with hooks at either side are practical.

Den—Dens have wedged their way into popularity and almost every modern house has one. They are usually furnished in mission, early English, or arts and crafts, and sometimes in oak or mahogany. Some dens are very roomy and are fitted up beautifully. The decorations, however, produce the desired effect, as without the artistic rugs, smoking tables, pipe racks, pennants, etc., this room would be lacking.

Many dens contain regular office desks, usually of a flat top type, with glass tops. The "sanitary" desks with drawers high from the floor are very good from a sanitary standpoint, and are attractive. There are many styles of these. The built up or sectional desk is fast growing into favor, as one may buy just what meets the requirements.

The regular library table is often used, particularly the table with a pull-out desk arrangement, such as is explained under library furniture. The swivel offlee chair, which turns at the base, with a medium high, or extremely high back, is also a very practical addition to the den. Such a chair must have a good spring and adjustment under the seat, to withstand the continual strain that is put upon it. A drop or two of oil occasionally will do much toward prolonging the life of the spring in one of these chairs. Self-retaining casters or the gliding metal shoe for the bottom of the legs of the chairs and desk are also recommended

An office chair with a solid wood seat will give long service and will not cost excessively. To prevent the clothing from becoming shiny from the use of such a chair, a light-weight cushion will be found useful.

For long service, the chair seat should be reinforced by a wooden strip or apron, fastened by screws to the bottom and running around the edge of the chair seat.

Short chair arms, i. e., short from the back of the chair to the front of the arm, will be found practical when desiring to draw the chair close to the table, and will prove more comfortable.

Lounges, davenports, sanitary couches, and Morris chairs, provided with fancy covers to carry out the color scheme, are also used in the rooms.

The cellarette, for soft drinks, smoking articles, etc., is often used in a bachelor's den. These contain upper and lower compartments, with an enclosed humidor for cigars and tobaccos, also wine glasses and decanters, all compact, ready for service.

# CHAPTER XII

Sewing Room—The sewing room is an important room and should be furnished so as to make everything in the room as convenient as possible.

Sewing rockers with low arms or none, with comfortable seats and backs may be had. Some with small work trays that turn under and pull out from the seat, are also used, as the sewing tools can be stored here when not in use. Low sewing screens, with small compartments for the tools, are also convenient.

Sewing tables, substantially built, which can be folded, are a convenience for cutting materials, and some prefer them to the old-fashioned lap board. Heavier wood sewing tables, with heavy pedestal or four-leg bases, are very much in demand. They have the drop leaves which can be raised to make the tops larger, besides containing compartments for sewing, and drawers partitioned for thread, needles, cushion, and other working tools to help concentrate the work for the seamstress. Many beautiful designs in willow or reed baskets may be had at a small cost.

Sewing Machines—In selecting a sewing machine, one must bear in mind that the investment should be considered as carefully as any other, as it is for a lifetime and the price should be the last thing considered. A low-priced machine will do fairly good work for a time, but as the best is the cheapest, by paying a

little more at the start, a high-grade machine which will have a lifelong guaranty can be obtained. This being the case, examine carefully the merits of a machine. Many sewing machines are being used as premiums. The claims for these machines are usually very misleading. Such machines really have but small value, for they are as a rule manufactured under contract, to be sold at a low price, and their sewing qualities are not equal to the better grades of machines. They are manufactured to meet a certain competition, and to be used to undersell competitors. Such houses are not manufacturers and the only interest taken in the sewing machine they sell is to realize their profit and to have the machine to sew, for a time, at least. Purchasers of such machines little realize that the time will soon come when repairs will be needed. When it does, to whom will they look for the necessary parts? It will be to one's advantage to pay a little more and get a sewing machine which has quality in every part, one which is backed by a reliable manufacturer with a world-wide reputation for reliability, whose guaranty on his product never expires. Many machines are made with fancy woodwork, etc., but remember that what is wanted is machinery, not woodwork.

There are many ways in which sewing machines can be cheapened and the average purchaser cannot detect it. Using *stamped* working parts, instead of *hand-finished milled steel* is one way of cheapening, and unless a purchaser is careful, a machine with very inferior construction can be demonstrated in such a fashion as to appear as good as the best, and time only will prove it to be inferior. Before purchasing a machine, decide on the kind of stitch wanted, whether the chain stitch or single thread, or the lock stitch or double thread. If the lock stitch is decided upon, then choose the mechanism, embodying the vibrating shuttle or the rotary shuttle principle.

Needles-There is no economy in buying inferior needles, as the difference in cost is more than offset by the saving of trouble, annoyance and damage to the machine. Poor needles are made of the cheapest material and are badly tempered and poorly finished; therefore, needles of inferior quality should not be used on any machine. First-class needles are made of the highest quality of steel and great care is exercised in having them properly tempered and finely finished. The eye of a well finished needle must necessarily be polished so that the thread will pass through smoothly; otherwise the thread frequently breaks. Badly tempered needles, or those made of cheap material, bend or break easily when passing through heavy material, and in most all cases make fine grooves in the throst plate of the machine which constantly cut out the thread, causing the impression that the shuttle or its tention is defective. Poor needles are also often responsible for skipping or dropping stitches.

Electric power is being used also in the sewing-room and by attaching a motor many machines are run by electricity, thus doing away with foot power.

### CHAPTER XIII

Porches—Years ago discarded furniture saw its last days on the porch, or under the trees. Ten years ago there were probably four or five lines of summer goods to be had, while now there are about twenty lines, due to the fact that there is a growing tendency to outdoor life.

Today in the modern home, the porch is almost as much a part of the house as the parlor or living-room, and complete suites are shown in reed, rattan, willow, grass, fibre, hickory, or cedar. These suites comprise chairs, rockers, settees, couches, swinging chair or hammock, table, magazine rack and often a tea wagon, all in the same material, design and finish.

Sun Parlor—Another feature of the modern home is the sun parlor. The sun parlor suite is similar to the porch suite with the addition of upholstery in fancy tinted cretons or other fabrics.

Mission Porch Furniture—Too much cannot be said of the valuable mission furniture which is used for porches, the best and most substantial being the kind that is thoroughly bolted together, having no nails, the swings being hung with extra heavy chains. This kind will last a lifetime, with ordinary care. Much light weight mission furniture is made with thin material and light nails and will serve its purpose for a

short time, but the weather and hard usage will soon wear it loose.

Summer Furniture—Summer furniture should be made exceptionally well to stand the weather. Usually the more hand work required on a chair, the more expensive it is. In examining such an article, see that the under parts are well wrapped as well as the upper parts. The many braces under such chairs, running diagonally across from one post to another, add materially to the strength of the chairs, and if these braces are securely wrapped with the material they will be of more strength, as well as more attractive. Rocker runners should be examined.

Metal chair tips that cover the ends of the posts of straight leg chairs and settees will protect the ends of the posts from splitting, and in case the chair legs are wrapped with the material of the chair it will help to hold the ends of the wrappings from breaking loose and unwrapping.

Rustic furniture is very good, but is liable to stretch if it becomes wet or is in long service.

Painted reed or willow furniture has a heavy appearance and the stain finish is needed to give the cool, refreshing appearance.

Genuine shellac, while not as expensive as the colored finishes, is a great factor in the life of a piece of reed furniture. Many imitations of shellac or special preparations are also used, but most of them can be detected by pressing the finger or thumb nail against them, as they have a soft finish, and will change color,

while genuine shellac is very hard, will stand washing and will not change color. The high-grade goods are usually shellaced, while the low grade are finished with imitations.

Sleeping Porch—The sleeping porch must not be overlooked, as it also is changing the plans of the architect nationally, if not universally. Ordinary porch furniture can be used if desired, although regular suites of beds, chairs, and tables to match may be had. A combination which can be used for a bed at night and a couch during the day may be had, although single beds or bungalow beds are better, where space will permit.

Folding cots with canvas tops attached are used extensively for sleeping porches or for use in the open. They have drop sides of mosquito bar and small curtains that lower to protect the sleeper from bad weather. Canvas houses having partitioned rooms are something recently put on the market to take the place of tents.

Many use the practical window tent and other sleeping apparatus to good advantage where a sleeping porch is not accessible. Those who sleep in this manner derive much benefit from the fresh air, but they usually pile on so many bed clothes to keep warm that the weight is too great to attain the required rest. There are, however, expensive bed clothes which are light in weight, that will furnish the necessary warmth. To those who can't afford these high-priced articles of comfort it is well to mention that there is on the

market a very simple rack which can be adjusted to any bed from three feet six to four feet six inches in width, over which the bed clothes can be thrown and held securely in place by means of fasteners on each side of the rack, thus keeping the bed clothes over the body, and allowing a free circulation of air. A person may put on the covers as freely as he cares, but will not feel the slightest weight while sleeping, as he is under the rack and can turn and toss without any interference. This is particularly good and is recommended for people having rheumatism or who, from sickness or surgical operations, can not bear the weight of the covers, or for mothers with very young babies, as thus all danger of suffocating the babies is overcome.

### CHAPTER XIV

Vacuum Cleaners—Vacuum cleaners have come to stay, but as a whole are crude, although most of them will do as represented for a time, at least. There is a great demand for a really good cleaner and the haste of manufacturers to get something on the market without first perfecting it has been the cause of many defects. In purchasing a vacuum cleaner it should not be forgotten that everything is made to sell and it is a very poor article that will not stand the test of a demonstration, at least. Unless a cleaner is a good one it is costly at any price.

Hand Power Cleaners—Many kinds of hand vacuum cleaners, such as suction pump cleaners, rotary cleaners, etc., are on the market. In hand vacuum cleaners the idea that is gaining the most headway seems to be the one resembling the carpet sweeper in appearance. These cleaners are constructed with a system of bellows, which develop a continuous suction; some have two bellows, some have three bellows—the more the better. There are many different models, some being made in connection with a rotary brush, like that of a carpet sweeper, which seems to be a good feature. Ordinarily the more complicated an article is, the more difficult it is to keep in repair, so it is well to avoid complicated machinery.

The hand suction pump cleaner is not practical, although low priced. Such cleaners will not materially reduce labor, although they may reduce the dust to some extent. Unless a cleaner can lessen labor it does not do the most important thing for which it was intended. A logical conclusion is, that the hand power vacuum cleaner with the most powerful and regular suction, capable of being operated by the least number of people and with the simplest construction all combined, is the one to purchase, regardless of first cost.

Electric Power Cleaners—Electric vacuum cleaners are also in their infancy and many improvements will be made upon them before they are perfected. Although several fairly good ones are made, none of them seems to last long enough for the money invested in them. Electric cleaners must of necessity be high priced, and it will be some time, no doubt, before an efficient electric cleaner will be on the market at a low price, because a good cleaner must first of all have a good motor, and a good electric motor itself is high priced; again, it is not reasonable to believe that dust and electric motors will bear close relationship.

Many of the most widely advertised vacuum cleaner concerns have failed within recent years, due to the fact that either low-priced electric vacuum cleaners can not be guaranteed or that there has not been enough demand created for the high-priced machines to justify the advertising.

Owing to the mechanical features of electric clean-

ers, it has not been a safe investment for women, as few women know how to keep them adjusted, and the repairing of a cleaner is an abomination.

Water Power Cleaner—A recent introduction is an arrangement that attaches to the water faucet, and by water suction the dirt is drawn out and forced into the sewer drain pipe. The simplicity of this apparatus makes it low priced and as it is not operated by a motor the idea seems to be the most practical yet introduced.

Avoid Irresponsible Representatives—Be careful in purchasing a vacuum cleaner except from a responsible concern or person, who will absolutely guarantee the machine to last at least a reasonable length of time. Do not buy of fly-by-night agents who get large commissions for selling such articles. Many people today who own vacuum cleaners, either electric or hand power, can not use them for the want of repairs. They don't know where to send for repairs, because they purchased the machine of some agent or irresponsible person, and no manufacturer's name appears on the machine.

Carpet Sweepers—Probably one of the greatest inventions known, up to the time of the vacuum cleaner, to lessen the work of the housewife, is the carpet sweeper. Sweepers of today are made so light running by the use of ball bearings, that there is little or no resistance. Rubber guards on the corners are also a great improvement over the braid guards, as they protect the walls and furniture.

Every carpet sweeper has a removable brush and ordinarily, when the sweeper seems hard to run or doesn't seem to perform its duty, it will be found that the brush needs removing and the hair and strings that have gathered on the ends of the brush need to be cleaned away. Many sweepers have been sent to the repair shop, when nothing but the brush needed attention. Some brushes will wear out and yet the rest of the sweeper will be too good to throw away. Remove the brush and replace it, at slight cost, with a new one, and the sweeper will be nearly as good as new. Occasionally the rubber tires on the wheels can be replaced at little expense. A sweeper case and bearings will wear out a couple of brushes, if the sweeper has the proper care.

Do not consider any agent who claims to be representing the "repair department" of a sweeper manufacturer, as factories have no such representatives—furthermore, such agents' charges will be exorbitant.

### CHAPTER XV

Home Building Pointers—When the interest on the investment, taxes, insurance and upkeep are fully considered, it may be seen that home building is not more economical than renting, but as it is much more satisfactory and comfortable, the outlay of money is not usually considered. Often an elaborate house is built and when it comes time to furnish it, funds are found to be lacking. The furnishing of a home should be as carefully thought out as the plans for the house. It would be as poor policy to build a home with no idea of the furnishings, as it would be to buy the furniture and expect to build the house to contain it. These important points should go hand in hand.

The question arises, what per cent of an amount spent for a house should be spent for the furnishings? There is no iron-clad rule covering this point, but a logical conclusion is that at least one-fifth of the value of the house should be available for the furnishings, and from that amount up to one-half or three-fourths. The interior furnishings of many homes are sometimes out of proportion with the exterior in that they are too costly. This shows as poor taste as does, the other extreme.

A person contemplating the building of a home will find many good ideas in the small booklets of bungalows, houses, etc., which are given away or are sold by architects. While the plans given may not exactly coincide with the specific case, the many suggestions will amply pay for the small investment.

Color scheme is another thing to be studied, as very few people know what colors should be used to produce the most harmonious effect. Along this line, it is well to know that the large paint manufacturers issue booklets which they will gladly furnish gratis, on application, to those desiring such knowledge. Some of these booklets also furnish valuable information relative to treatment and care of floors.

Do Not Invite Poor Service—A kindly consideration for others nearly always brings its reward. Time is the principal asset of the clerk who waits on you when you select your house furnishings. He makes his living by selling this time to his employer. The amount of his salary depends upon the way he employs this time—the gross sales he can make—the profit into which he can convert his time to the benefit of his employer.

By shopping without some definite idea of what is wanted, you waste the time of the clerk as well as your own time, and interfere directly with his earning power. You need not be surprised nor hurt if he reciprocates your thoughtlessness by selling you what he can, in the least possible time, and without very much consideration of your interests.

If you start out with a reasonably clear conception of sizes, colors, qualities and styles, you effect a great saving in the time of the person who waits on you. The chances are that he will quickly recognize this fact and will co-operate with you to the best of his

ability and to such an extent that you will be amply repaid for the study you have devoted to the matter.

Take All Measurements—Take the measurements of all floors and stairways for rugs and carpets, all windows and doors for draperies and all windows for shades. Put in the diagram of each room its color scheme, to better enable the salesman to show what is wanted without unnecessary loss of time. Study locations and spaces of the rooms to intelligently place the desired article of furniture.

If you cannot take these measurements, it is advisable to notify the merchant with whom one expects to deal, and he will send and have them taken, usually, without extra charge. If this is not possible, as in the case of the rural or suburban district, it would be well to engage a carpenter to do the measuring, even though a small charge be asked.

For future telephone calls or other communication, it is well to learn the name of the salesman who waits upon you.

Prepare a List—A house can be furnished at almost any cost desired, owing to the bountiful lines of goods to be had, varying from the very lowest priced to the most elegant and high priced.

Many who have a limited amount of money with which to start housekeeping, go into a store with no idea of what they want or how far their money will go. After the work of selecting the goods is completed and the salesman gets the goods listed, they find they have a great deal more than they can pay

for, or that they have omitted a desired article, and therefore find it necessary to cut off of the list something just selected. This is often the case and this time can be saved if one will but use a carefully prepared list of what is wanted.

Those who are limited in funds and want to buy just what is needed until better settled or until more money is available, will find the following list very helpful. This list includes everything but heating stoves, bed clothes, pictures, cooking utensils and laundry tools, as these are usually provided beforehand.

The first column to the left represents a "fair" grade of furniture. A lower grade than these prices represent may be had, but even this "fair" grade lacks quality, and if purchased, ought to be of good, substantial oak, and not of some imitation or soft wood. If one can afford about what the next "intermediate" column represents, the grade will be substantially better, and so on into the "medium" grade, or from that up to a still higher grade, in which quality furniture will be much more in evidence.

The "essentials" then, the first to be looked for, are in the left column, under three grades. Run down the list and it will be seen that everything listed is indispensable. After the essentials are selected, in about the grade one desires, and it is found that the list does not total as much as thought, glance over to the right side to the corresponding column, where the non-essentials are added, and pick out the most desired thing, as a buffet, dressing table, bookcase, davenport,

sewing machine, etc., and it will be easy to list the furniture. The total of this list will not vary a great deal from that of any regular furniture stock, and will save time and patience, as carefully selecting furniture is a task not courted by every one.

ES	SENT1A	LS.		NON		
Fair	Inter- mediate	Medium		Medium	Inter- mediate	Fair
			KITCHEN			
\$15.00	\$25,00	\$45,00	Cook stove	\$45,00	\$25.00	\$15.00
.75	3.00	4.00	Stool	4.00	3.00	.75
.70	.70	1.50	2 shades Kitchen table with	1.50	.70	.70
1.75	2.75	3.75	drawer Kitchen cabinet	35.00	25.00	15.00
		1 1	Fireless cooker	20.00	12.00	7.50
	1		Refrigerator	25.00	15.00	8.50
	-	1	20 yds. linoleum	30.00	12.00	10.00
			Chair	3,00	1.50	.75
\$18.20	\$31.45	\$54.25	1 1 1	\$163.50	\$94.20	\$58.20
			DINING ROOM			
\$12.00	\$25,00	\$35.00	Table 8-ft.	\$35,00	\$25.00	\$12.00
8.00	18.00	30,00	6 chairs	30.00	18,00	8.00
10.00	20,00	30,00	Rngs	30.00	20,00	10.00
8.00	15.00	25.00	Dishes	25.00	15.00	8.00
1.05	2.25	2.25	3 shades	2.25	2.25	1.05
4.00	8.00	10.00	2 pr. curtains	10,00	8.00	4.00
	1	1	China cabinet	35.00	25,00	16.00
	1		Buffet	50,00	35.00 12.00	19,00
\$43.05	\$88.25	\$132.25	Side table	\$235.25	\$160.25	\$88.05
343.115	\$55.25	1132.23	BEDROOM	4233.23	4100.25	400.00
\$5,00	\$15.00	<b>\$35.00</b>	BEDROOM	\$35.00	\$15,00	\$5.00
2.00	5.00	10,00	Spring	10.00	5,00	2.00
3.00	8.00	15.00	Mattress	15.00	8.00	3.00
1.75	3.00	5.00	Pillows 1 pr.	5.00	3.00	1.75
8.00	15.00	25,00	Rugs	25.00	15,00	8.00
.70	.70	1.50	2 shades	1.50	6.00	4,00
4.00	6.00	10,00	2 pr. curtains Dresser	35.00	20.00	10.00
10,00	20,00	35.00	Chiffonier	30.00	15.00	6.00
	1	i	Dressing table or ladies		13.00	0.00
	1		desk	25.00	15.00	8.00
			Chair to match	8.00	5.00	2,00
			Cedar Chest	25.00	15.00	8.00
			Chair	8.00	5.00	2.75
			Rocker	9.00	6.00	3.50
	1		Costumer	12.00	8.00	2.50
\$34.45	\$72.70	\$136.50		\$253.50	\$141.70	\$67.20

ES	SENTIA	LS.			ESSENT: ADDED.		
Fair	Inter- mediate	Medium		Medium	Inter- mediate	Fair	
\$5.00 3.00 5.00 15.00 1.05 4.00 5.00	3.00   6.00   15.00   5.00   9.00   20.00   15.00   25.00   35.00   1.05   2.25   4.00   6.00   10.00		Table Rocker Rocker Rugs 3 shades Draperies 2 pr. curtains Davenport Stool	\$25.00 15.00 20.00 35.00 2.25 10.00 15.00 9.00	\$10.00 6.00 9.00 25.00 2.25 6.00 8.00 25.00 5.00	\$5.00 3.00 5.00 15.00 1.05 4.00 5.00 18.00 3.50 7.00	
\$38.05	\$66.25	\$122,25	2 chairs	\$201,25	\$108.25	\$56.50	
	These	-	Couch Bookcase Table Rugs 2 shades Draperies 2 pr. curtains Morris chair Leather chair or rocker	\$50.00 50.00 35.00 45.00 1.50 10.00 15.00 25.00 50.00	\$25.00 25.00 25.00 30.00 1.50 8.00 12.00 30.00 \$164.50	\$10.00 10.00 9.00 15.00 .70 4.00 5.00 6.00 9.75	
	Rooms	<b>s</b>	Machine Chair Table Cheval glass Rug 2 Shades Curtains 2 pr.	\$45.00 5.00 5.00 40.00 25.00 1.50 6.00 \$127.50	\$25.00 3.00 3.00 25.00 12.00 1.50 4.00 \$73.50	\$20,00 2.00 1.00 20.00 9.00 .70 2.00 \$54.70	
	are		Glass Seat Umbrella stand Rug Shade Clock	\$15.00 15.00 5.00 12.00 .75 50.00 \$97.75	\$7.00 8.00 2.50 6.00 .75 25.00 \$49.25	\$3.00 3.00 .60 3.50 .35 15.00 \$25.45	
I	Luxurie	es	DEN. Desk Chair (Swivel) Rugs Curtains Couch Cellarette Smoking cabinet Stool Chair	\$45.00 15.00 25.00 10.00 45.00 30.00 25.00 9.00	\$25.00 8.00 15.00 6.00 25.00 20.00 15.00 5.00 6.00	\$10.00 5.00 6.00 3.00 10.00 15.00 8.00 3.00 4.00	

# HOW TO BUY FURNITURE

140

By totaling the above lists it will be seen by the left column that a person can buy a fair grade of furniture for four rooms for \$133.75, an intermediate grade for \$258.65, and a medium grade for \$445.25 up to any amount, depending, of course, on the number of non-essentials one wishes to include in the list.

## CHAPTER XVI

Carpets and Rugs—There is nothing in the home that needs as much thought by the layman and about which there is as little known as the buying of carpets and rugs. It is a life study to acquire the many things which may be learned in this particular department of home furnishings. Occasionally a person will insist that he is better informed than the salesman. The fact of the matter is, that unless one goes to a perfectly reliable merchant to purchase what is required, one may be miserably deceived in buying domestic and oriental floor coverings.

In buying a carpet or rug, a person should know what is needed. Some insist upon quality, regardless of price; others knowing that they cannot get the finer qualities at their price, are content with the more medium grades of carpetings. The wearing merit, however, is the most important factor and the first question usually is "What will wear the best?" Opinions vary somewhat on this point, as some claim that a high-grade Axminster will wear best, while others contend that a high-grade Wilton will give the best service. Either are practical, but more of the high-grade Wiltons are used, while in the more medium grades of carpetings, the Axminster leads. The long service of floor coverings varies greatly and de-

pends largely on the number of grown folks, children, cats and dogs that tread on them, which accounts for the poorer service some families may get from a carpet, while another family will have just the opposite experience.

While service should be the first consideration in buying a rug, the pattern is one of the great factors in the carpet business. The average customer is guided in a great measure by his desire for a certain pattern, therefore "pattern" alone sells the majority of floor coverings, regardless of quality. For this reason, attractive patterns are found in the very lowest priced carpetings. Often a low-priced carpet is purchased because of its attractive pattern, when, had the buyer been informed as to the difference in quality, a better grade of carpet might have been purchased.

While it is not the plan of this book to go into detail relative to the manufacturing of floor coverings, there are a few terms used in the carpet business with which every purchaser should be more or less familiar in order to intelligently buy his floor coverings. A few of the most important follow:

"Woof, or weft," in most cases called "filling." These terms all mean the same and are most commonly spoken of in relation to an ingrain carpet. After an ingrain carpet is woven the above terms may also be called the surface, each thread or yarn of which, in weaving, has been thrown by a shuttle through the

warp from right to left, which terminates at either selvage and then returned. The "selvage" is the edge of the cloth so closed by complicating the threads as to prevent raveling.

The filling, as mentioned above, must of necessity have something to hold it together, which is called the "warp," or more ordinarily the "chain." The "chain" or "warp" is the threads which extend lengthwise in the loom, and are crossed by the "woof," which holds the woof from pulling apart. When the chain of a carpet breaks or wears out, the carpet will pull apart, therefore a strong chain to a carpet is essential.

"Textile"—A name used for any fabric woven in a loom.

"Texture"—The manner of weaving a web or cloth. Disposition of the several parts of a body in connection with each other: filaments or fibers interwoven, or the number of warp and filling threads to the inch.

"Web"—The textile being woven as it comes from the loom.

"Two-ply"—When spoken of in relation to an ingrain carpet designates the weight of the carpet, as being made of two plies, or webs.

"Three-ply"—A three-ply carpet is one that is woven on an ingrain loom with three plies instead of two, but is not called an ingrain carpet. There is no such thing as a three-ply or a two-and-one-half-ply ingrain carpet, as an ingrain weave has but two plies.

"Pick"—This relates to the thread of woof which is carried through the warp by the "shuttle," an instrument used in weaving in connection with the loom.

"Pile"—This term is often used, and is the long nap or woolly surface of a carpet. It is the same in carpets as in a piece of plush, which, when you rub your hand over it, changes the shade of the color. It is the "pile" that causes the different shades in the same carpet or rug. Cut a strip of velvet or Axminster carpet into two pieces and reverse one piece so that the "pile" runs in opposite directions, and notice the difference in shade. When a carpet or rug is made from a roll of carpet and a border is placed around it, a slight difference in color will be noticed owing to the fact that the "pile" in one strip of the border runs in a direction opposite to that of the carpet.

A long "pile" carpet usually has a prettier effect than a short "pile" carpet. For that reason an Axminster, or Moquette, or Savonnerie carpet has a softer appearance than a velvet, and velvet carpet has a better appearance than a Brussels carpet.

"Wires"—Has the reader heard a dealer speak of an eight, nine, or ten wire tapestry Brussels rug, and did you know exactly what was meant? In the first place, tapestry Brussels carpetings are different from the velvet, in that the tapestry carpets have small loops all over the surface while the velvet carpetings have not. A velvet carpet is woven on the same kind of a loom as the Brussels, and has this additional dif-

ference, that small wires which terminate in knifelike ends are inserted under each loop and when a velvet carpet is desired, the wires are withdrawn automatically to be reinserted until the carpet or rug is These wires run from seven to ten to an woven. inch, and when withdrawn from the Brussels carpet do not cut it, but leave the loops over the surface of the carpet. Therefore, in speaking of an eight-wire tapestry, the quality is self-defined, in that there are eight of these rows of loops or "wires" to the inch, each row running across and not up and down on the carpet. When one speaks of a seven, nine, or ten-wire tapestry carpet, the same rule applies. The more the wires to an inch, the heavier will be the rug, consequently a tapestry or velvet rug or carpet advertised at a low price means nothing unless the number of wires are designated.

As stated before, the process of weaving the velvet rug is the same as that employed in making the Brussels, but when the knife-like wires are withdrawn they cut the loops and make a "pile" rug, which is called a velvet rug.

There are many grades of carpets on the market and the inexperienced can be easily confused.

Printed Tapestry Brussels—"Printed" tapestry carpets are an inferior grade. They are sold in many cases for the usual tapestry carpet and the layman fails to detect the difference. They are made by weaving yarn, undyed or of a uniform tone of color, on a tapestry loom. After the fabric is woven, it is placed on large

revolving drums. Large pattern rollers, with the desired design of carpet engraved on them, are put in contact with the face of the woven fabric which is on these large drums, and the pattern is printed by rotating the drums and rollers, but one roller being used for each color. They are in this manner printed on the face of the carpets and through the fabric to the back. Therefore they are first woven and then the pattern is *printed*, as can be seen if close examination is made.

Tapestry Brussels and Body Brussels and Velvets—The difference between the yarn of the best tapestry Brussels and a body Brussels or Wilton rug, is that in the tapestry rug the yarns are printed before weaving, while in body Brussels or Wilton carpets the yarns are dyed before weaving. By taking hold of a body Brussels or a Wilton velvet rug and turning it to see the back, one will see that the colors are woven through on the tapestry and cheaper velvet. This is the best way for the inexperienced to detect the higher grade carpetings.

The body Brussels carpet is much better than the tapestry grades, in that it is made of a worsted yarn built upon a linen or lisle chain and a linen weft.

The "Wilton" velvet is made the same, but the "pile" is usually longer than the loops of a Brussels, because the wires over which they are woven are usually thicker. Also there are three shots of linen weft thread to each wire, while there are but two shots in

the Brussels, which accounts for the difference in weight.

Seldom more than six colors or "frames" are used in weaving these rugs and some run as low as four colors. The more the colors the heavier the rug. This doesn't mean that the colors all show on the top at once, as when the colors are not needed on the surface they are "planted" or buried and go to form the back of the rug.

Plain Wiltons are cheaper because woven on an entirely different machine.

Tapestry carpets are cheaper in that they have a "jute" stuffer yarn, a cotton chain, and a linen, jute or cotton weft, which acts as a binding thread for the wool or worsted loops.

The best velvet carpets may also resemble the Wiltons in having three shots of filling weft to each wire, where in the medium or lower grades only two shots are used, as can be detected by close examination.

Qualities of Wilton rugs vary; some are half wool face, some are wool, others are half wool and half worsted, while others are one-third wool and two-thirds worsted and still others are all worsted.

The difference between "woolen" and "worsted" fabrics is very hard to detect. The "woolen" threads are spun from short staple wool, while the "worsted" threads are spun from long staple wool and are harder twisted. Constant handling of carpetings is about the only way by which a person can become familiar with the different fabrics.

A Poor Test—Forcibly pulling out the nap of carpet is not a fair test of the quality of the fabric, as any grade can be plucked out.

Axminster, Moquette and Savonneric Carpetings—Probably the carpet with the greatest sale today is the Axminster carpet. It is made of tufts of woolen yarn, woven by special machinery into the body of the fabric, after being inserted in the warp.

"Moquette" carpets are now called Axminster carpets,

"Savonnerie" carpets are woven like Axminster carpets, but are heavier, and but few of them are now being used.

The marked growth in the demand for Axminster rugs has forced competition in manufacturing and has thrown upon the market an inferior grade of goods. While called Axminster, in reality they contain as much jute (vegetable fibre), animal hair, etc., as wool, and unless one is a judge, these inferior grades may be selected for the rugs of the better grade. They are made in attractive patterns and until used on the floor awhile, cannot be detected from the best by the inexperienced.

One can usually detect the "jute" or inferior material in a rug by feeling of the fabric with the bare hand. The jute has a harsh feeling and by close inspection will be seen in the nap or pile of the inexpensive rug. It has a fibrous, wood-like resemblance. The better grades of Axminsters have a finer nap and a softer feeling. It pays to examine a rug at close

range, to feel it, and then compare weight when comparing prices.

Also notice the back of an Axminster rug. The more closely it is woven the firmer it will be, and the better it will wear.

Sweeping of Axminster Carpets—When sweeping Axminster carpetings, many people are surprised and alarmed at the lint which comes from them. This occurs as long as an Axminster carpet is on the floor, more, however, when the carpets are new than later on. This is not a defect in the carpet, as most people presume, but is due to the short clippings which settle and remain in the nap of the rugs after they are woven and clipped at the mill.

Sizing of Rugs—When a rug is cleaned, it sometimes loses its shape because the sizing or glue is beaten from off the back. To renew its shape have the rug "sized." The cost will be from seventy-five cents to one dollar for a rug measuring nine by twelve feet and will be worth five times the expense in the wearing qualities of the rug. Almost any store which handles floor coverings will size it. Sometimes it is necessary to send it to a carpet renovator to be sized.

To size a rug, take it to an attic or some place where, after being stretched, it can be tacked face downward. Place the tacks from eight to twelve inches apart. Dissolve five cents' worth of fish glue (obtainable at any drug store) in one gallon of water. After the glue is thoroughly dissolved, sprinkle the rug generously, being careful with light weight rugs that

the glue does not go through. Allow it to dry thoroughly, requiring about twenty-four hours, after which the tacks may be removed and the rug will be ready for the floor.

Moths—Moths can be prevented and exterminated by the use of benzine. A spray of some sort should be used and great care exercised, on account of the inflammable character of the liquid.

Sprouting—When the surface of a carpet is pulled, say by a tack in some one's shoe, the strands of yarn are pulled to the surface and the long ends form what is known as a case of "sprouting." The finer the quality of yarn the more liable it is to occur, as the fine quality is soft and easily broken. The claw of a dog or cat, a nail in a shoe, a broken caster, or even hard sweeping with a stiff broom may cause "sprouting," and is not due in any way to the quality of the carpet.

Smyrna Carpets—The Smyrna rug or carpet has been one of the best domestic grades known. It is practically obsolete, however, as the other grades of carpetings are taking its place. Competition, in a sense, has been the cause of its extermination, as it was imitated, in a manner, by a jute rug that has very much the same appearance, but is much lower in price.

In the Smyrna carpets, the weft is dyed woolen yarn with a cotton warp, and has two faces owing to the wool yarn being on two sides.

Ingrain Carpets—Most all carpets that are made on an ingrain loom are called ingrain carpets, and all materials are dyed before being woven. The most important ingrain carpets are: "Extra super," "cotton chain," and "union."

The "extra super" is the most expensive and has an all-wool filling and an all-worsted or wool chain. The "cotton chain" carpet is the same, except the chain is cotton or lisle. The "union" carpet is one in which the filling and chain are cotton.

The "pro-Brussels" is another grade that ranks in price with the "extra super" carpet and differs from it only in the process of weaving as it has a heavier filling and a chain of jute.

The "granite" carpet is a low-priced carpet with a cotton filling and a part jute chain.

All grades of ingrain carpets will come under one of these heads, although each mill may put on its own make of carpet a particular copyrighted name, and sometimes a fancy name on a carpet will help much toward the sale of it, which makes it very important to know a good carpet when it is seen.

By unraveling the ends of carpets one can detect an all-wool carpet from a cotton filled one. The chain also can be examined.

Points of Service—As before noted, a carpet with the strongest chain will wear longest; for that reason, the lisle or cotton chain carpet will give better service, but colors will not hold in a cotton chain carpet as well as in one of wool chain. An ingrain carpet a yard wide should have about ten hundred and eighty chain ends. They will vary from that down to seven or eight hundred. As stated before an all-wool car-

pet advertised at a very low price means nothing unless the quality is mentioned. A carpet with but seven hundred chain ends, all wool, would sell for much less than one with ten hundred and eighty ends. These things must be taken into consideration when comparing prices.

It will be found that a wool or wool-filled carpet with the most white in it will contain more pure wool than the dark patterns. The carpets with dark patterns sometimes contain a lot of animal hair, which is mixed in and sold for all wool.

An ingrain carpet should be thoroughly cleansed from oil. This cleansing of the yarn is the result of a perfect scouring process before it is woven at the mill. Many oily carpets are sold at a low price, but will give poor satisfaction, as they will hold the dirt and dust. However, those containing oil can, by close examination, be easily detected.

Shrinking of Carpets—Ingrain carpet with a cotton chain is liable to shrink and should, if possible, be laid as soon as cut. A "union" carpet is, in this respect, worse than any other and will sometimes shrink a couple of feet in twelve hours and especially if the atmosphere is damp. Such a carpet should always be cut longer than the room or trouble will be experienced in laying it.

Carpets Fading—Any carpet, regardless of its cost, will change color or shade. Nothing is made which will not fade.

Size of Room, feet.	Yards 36-inch Carpet needed.	Yards 27-inch Carpet needed.	Yards 27-inch Carpet, including Border, needed.
9 x 9 9 x 10½ 9 x 11½ 9 x 11½ 9 x 13 9 x 14 9 x 15 9 x 16½ 9 x 17½ 9 x 18 10 x 10 10 x 10½ 11 x 10 x 10½ 11 x 11 11 x 11 11 x 12 11 x 13½ 11 x 15 11 x 18 12 x 12 12 x 13½ 12 x 15 12 x 15 12 x 15 12 x 15 13 x 16 12 x 18 13 x 13½ 13 x 15½ 13 x 16 13 x 18 14 x 14 14 x 15½ 15 x 17 15 x 15 15 x 16 15 x 16 17 x 17 15 x 15 16 x 16 17 x 17 17 x 20 16 x 18 16 x 24 17 x 17 17 x 20 18 x 21 18 x 21 18 x 21 18 x 21 18 x 22 20 x 22 21 x 21 22 x 22 24 x 24	91/2 11 11 112 112 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2 113/2	12% 1434 166 1634 1894 21 221 223 224 16 1694 1994 223 224 226 226 226 226 226 226 226 226 226	17 1/4 193/2 21 3/4 24 3/4 27 3/4 27 3/4 27 3/4 27 3/4 27 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28 3/4 28

The above table will be a great help to those wanting carpets for their home. It is a table of different sized rooms and gives the number of yards of 36-inch carpet, 27-inch carpet, made plain without a border, also 27-inch carpet made with a border, which would be required to cover a room.

If the size of the room is not given in this table, allow enough for the next larger size. In figuring the amount of carpet needed in fitting these rooms, the ordinary waste is included. Perhaps one will wonder why there should be a waste of carpet in matching the patterns. Patterns in the different style carpets do not match at exactly the same distance, some patterns being 30 inches apart, some 32, 34, or 36 inches. In a room which measures 14 by 15 feet, one will readily see, by the table, that it requires five widths of 36-inch ingrain carpet, each width being 14 feet long, to actually cover the room. The pattern will not match at 14 feet exactly, as it cuts at 14 feet and 9 inches, so to match the carpet, the strips must each be cut 14 feet and 9 inches. On five widths of carpet, one would be obliged to use 45 inches more carpet than is actually needed to cover the floor, and would be charged with the 11/4 yards of waste carpet used in this matching. This waste in matching also applies to Brussels, velvet and Axminster carpets as well as to ingrains. Should a room be 14 by 14 feet, it will require five widths of ingrain carpet to cover the floor and there will be a strip of one foot on one full side that will either have to be turned under,

or it can be cut off and used in matching at threshold, or saved to be used for patching.

Notice that two rooms of different sizes will require the same amount of carpet. A room 14 by 14 will require as much ingrain carpet as a room that measures 15 by 14, due to the widths of the carpets and to the waste in matching.

It often occurs that one will ask for 25 yards of carpet to cover a floor five yards square. Owing to matching of the figure, this size room may require 26 or 27 yards, and consequently a 25-yard strip when matched would be found lacking and would necessitate another trip to the store for more carpet.

Carpet Widths and Measurements—Most ingrain carpets are 36 inches wide.

Most Brussels, velvet and Axminster carpets are only 27 inches wide; while borders used in carpets are both 22½ and 27 inches wide. (The above list gives yardage when figuring on 22½-inch border only, as it is the most commonly used.)

If a room is odd shaped, has a bay window, or an offset and the exact amount of carpet desired cannot be figured, the diagram of the room, giving all measurements, should be sent or taken to a reliable dealer.

Caution should be exercised when measuring a room for a carpet which is to have a border. Be sure to measure each side of the room, as some rooms, especially in old houses, are an inch or so longer on one side than on the other and as a border carpet will not stretch it must be cut exactly to fit the room.

The price of a carpet, then, will vary as to the quality and price of goods used, whether with or without a border, and as to the size of the room.

Selecting Carpets—It is best to select carpets before selecting wall coverings, as wall coverings are much more numerous, and can be selected to blend with almost any carpet, while it is not so easy to select carpets to match wall coverings. Select carpets in the daylight if possible.

Color Blending Chart—The following color-blending chart will be of assistance to those desiring to harmonize colors:

COLOR-BLENDING CHART

		BLUE	BROWN	CREAM	GREEN	GRAY	HELIO	MAROON	MYRTLE	NAVY	NILE	OLIVE	ORANGE	RED	SALMON	SKY BLUE	TAN	WINE	YELLOW
BLUE	Γ		G	G	S	G	В	F	F	w	В	F	S	F	F	w	G	F	S
BROWN		G		G	F	F	S	W	G	G	F	G	w	w	W	G	В	W	В
CREAM	- [	G	G		G	w	G	G	G	G	G	G	G	G	G	G	W	G	W
GREEN	- [	S	F	G		G	В	F	w	F	W	W	F	S	S	В	F	F	В
GRAY	- 1	G	F	W	G		G	G	G	G	G	G	G	G	G	G	В	G	F
HELIO	Ti	В	S	G	В	G		В	В	В	В	В	В	В	В	w	G	В	S
MAROON	1	F	W	G	F	G	В		F	F	В	F	В	W	В	В	F	w	S
MYRTLE		F	G	G	W	G	В	F		G	В	w	S	F	S	В	G	F	В
NAVY	1	W	G	G	F	G	В	F	G		В	G	S	F	S	G	G	G	S
NILE	- [i	В	F	G	w	G	В	В	В	В		W	В	В	F	w	F	В	В
OLIVE	Ţ	F	G	G	W	G	В	F	w	G	w		S	В	В	В	w	w	В
ORANGE	- [	S	w	G	F	G	В	В	S	S	В	S		w	w	В	F	В	В
RED	П	F	w	G	S	G	В	W	F	F	В	В	w		w	В	G	w	S
SALMON	T	F	W	G	S	G	В	В	S	S	F	В	w	w		F	G	В	В
SKY BLUE	Ti	F	G	G	В	G	W	В	В	G	W	В	В	В	F		G	В	F
TAN	1	G	В	w	F	В	G	F	G	G	F	W	F	G	G	G		G	w
WINE		F	w	G	F	G	В	w	F	G	В	w	В	w	В	В	G		S
YELLOW	[	S	В	w	В	F	S	S	В	S	В	В	В	S	В	F	W	S	

KEY-B-BAD

W-WEAL

E-E.

0-000

S-STRONG.

## CHAPTER XVII

Linoleums—This word is probably the most abused of all those given to floor coverings. It is pronounced incorrectly, viz: magnolia, meloleum, namoliam, naloeum, molian, and in various other ways. The accent is on the second syllable, li-no'-le-um.

Linoleum is oxidized linseed oil and ground cork, mixed to a plastic cement and applied with a heavy pressure to a prepared burlap backing. The important ingredient is the cork, which being full of minute air-cells, makes it a non-conductor of heat and cold.

Linoleums are very easily cleaned and very serviceable, and for this reason are growing in demand each day, and are being used in all rooms of the house.

Different Grades—There are three general types of linoleums. There is the "plain" linoleum, where the compound is applied in one solid color to the backing, and is left without any decoration, and the "printed" linoleum, which has the pattern printed in decorative colors on the surface of the plain goods, and can be bought for from forty-five cents to a dollar a square yard, owing to the quality.

The "inlaid" linoleum is the best grade and is made in small patterns and matched together by special machinery, similar to tile flooring, hence the word inlay or inlaid linoleum. To detect inlaid linoleum, examine the edge and it will be seen that each figure runs through to the back or burlap.

Inlaid linoleum can be purchased for from \$1.00 to \$2.00 per square yard. As there are many grades on the market, it will necessitate an expenditure of about \$1.50 per square yard to secure the quality that will give the best service.

Seconds—What is known as "seconds" or damaged linoleum is sometimes sold by the mills at a discount, and it is upon these "seconds" that one sometimes sees attractive quotations. One must be guided by the fact that low prices, or price cutting, does not necessarily mean a lowering of the price of the standard grade, as often these seemingly standard grades are but "seconds" or remnants.

Linoleum Preservation—The surface of linoleums may be preserved to a great degree by applying some kind of a varnish preparation when the linoleum is newly laid, and repeating the operation about twice a year.

Computing Yardage—Linoleum comes in rolls of about sixty square yards; however, if the rolls are over two yards wide, the yardage is greater. They run in different widths from a yard to four yards, and as they are always figured and priced by the square yard, it is necessary to compute the surface to square yards, to determine the amount needed for a given floor. Many do not consider this fact and most salesmen overlook this point, consequently there is often a misunderstanding when the bill is rendered.

Waste and Avoiding Seams—Any waste in cutting linoleum, due to an uneven or odd-shaped room, is charged to the buyer. As in matching carpet designs, the buyer is entitled to all waste pieces, and these may be used for door strips, on cellar steps, or for future patching.

The advantage in buying linoleum four yards in width for rooms over two yards wide is apparent, as the seam in the middle of the floor can be avoided.

Care of Linoleum—Before laying linoleum have the floor level, dry and free from nails, or it will soon wear through at the uneven edges of the flooring. If the floor has large open cracks, they may be filled with glue and chalk and allowed to harden before the linoleum is laid.

In hot weather, linoleum is liable to expand, causing buckling or bumping. To overcome this, let the linoleum lay for some time before tacking the edges.

Floor paper, carpet felt, lining, etc., should not be put under linoleum when laying it. The linoleum keeps out the air, consequently in the case the paper or lining gets wet, as in scrubbing the floor, it cannot dry out, and soon rots and damages the linoleum. For this reason it is not policy to lay linoleum on freshly scrubbed floors; let them dry thoroughly.

In the present-day bungalows and houses such materials as asphalt, cement, concrete, etc., are being used for floors. Before laying linoleum on such floors it is well to consult a first-class dealer and get any information needed regarding the treatment of the floors pre-

paratory to the laying of the cover. If too much tar is used in the asphalt floor, it produces a soft effect and does not make a good foundation for linoleum.

Linoleum should not be unrolled in cold weather without first warming it, as the surface may crack when cold. Have it thoroughly warmed by placing the roll over a register or near a stove for about twenty-four hours.

In washing or scrubbing linoleum use only warm water and good soap.

Inferior soaps usually contain acids or strong alkali, and will destroy the surface; and lye, ammonia, strong chemicals or powders will eventually counteract the oily ingredients which make the linoleum pliable.

Avoid poor casters on furniture, as they are injurious to the surface of linoleums, as are rough chair and table legs. Small metal chair furniture glides are recommended for furniture which stands on linoleumcovered floors.

## CHAPTER XVIII

Window Shades—Shade cloth is made of muslin or linen cloth rendered opaque by being heavily sized and stiffened.

The lower grades are stiffened with clay, mixed with water, and pressed into the meshes of the cloth by passing through rollers. The better grades are stiffened with lead and oil.

Holland shade cloth is made of linen, filled and stiffened with starch.

Many kinds or brands of window shadings are on the market, and each carries a strong guaranty, but they consist mainly of those two qualities known as "water color" and "opaque oil" shades,

The "water color" shade is inexpensive, and is made with water color on cheap cloth. These colors are not fast, and will run if they get wet, although with proper care they should last for years.

The "opaque oil" shade is much the better quality, and about twice the price of the water color shades. The color in these shades will not run to any extent when wet, but unless the shade is removed from the brackets and stretched and dried it will lose its shape. Probably more of these shades are sold than any other grade, and they have been known to last for twenty-five years.

The Holland shade is very durable and is highly recommended, although higher in price and more or less transparent, and to make a dark room in the day time necessitates another shade.

While all shades may not have a filler, the paint is usually prepared in such a way as to act as a filler when applied.

How to Detect Quality Goods—To detect the quality of shade cloth, it is necessary to examine the cloth before the paint and filler is applied. This is impossible, usually, but the same result may be obtained by taking a small piece of the shade material, about two inches square, and holding it between the thumb and index fingers of each hand, rubbing briskly until the filling and paint falls out of the cloth. Then the threads of the cloth can be seen. The standard weight of handmade cloth will contain fifty-six of these tiny threads to the inch, while most of the machine-made cloth is but forty-eight to the inch. The closer these threads are woven the better the shade should be.

Shade Rollers—Shade rollers play an important part in window shades, and unless a shade is mounted on the best rollers constant trouble may be expected. The high-grade shades contain better rollers than are used for the cheap shades. The rollers alone in the best grade of shades cost nearly as much as the completed water color shade.

There are many kinds of shade rollers on the market; buy the best you can get and save money and patience, as a poor roller is an abomination. Care of Window Shades—Window shades require attention if satisfactory service is expected of them. It is well to take them out of their brackets once a year at least and adjust the rollers, which in time become somewhat weakened by the constant strain.

When a shade runs to one side and off of the roller at the end, it should be taken down and examined. Ordinarily this is caused by the shade not being mounted squarely on the roller.

If the roller seems too weak to roll the shade up, it can be remedied by pulling the shade down as far as it will go, and then getting on a ladder, taking the shade out of the brackets (while unrolled) and rolling up the shade by hand. After the shade is rolled up, put it back in the brackets and pull down the shade as usual and the spring in the roller will be found to be stronger.

Another way is to take the shade from the brackets and tighten the roller spring with the fingers.

Measuring Shades—In ordering and measuring shades, there are several things that must be designated. Be sure to state whether the measure given is the width of the cloth or the width of the roller. Be very careful on this point, or the shades may not fit. Always give the length of the shade wanted when it is finished. For instance, if a window is seven feet long, it would necessitate a shade seven feet long when finished, i. e., after the hem is completed at the bottom for the stick and a little extra allowed for at least one full turn around the roller at the top, to prevent the shade from pulling off of the roller.

State whether the shade brackets are to be fastened inside the window easing or outside. Usually, the measure for a shade which is to be fastened on the casing is taken from the center of the same on each side, and the brackets should be attached to the uppermost part of the window easing.

When measuring shades, use an accurate tape line or an extension rule,

If a duplex shade is wanted (that is, one color on the outside and another color for the inside of the house) be sure to designate which color is to be put on the outside, as it makes a difference in turning the hem at the bottom. Duplex shades are made that the outside of the shades may match the color of the exterior of the house and the inside match the interior decorations.

There is nothing in the whole line of house furnishings which people seem to dislike to pay so much as a window shade bill. When an estimate is received that amounts to \$20 or \$30 for the shading of a house, they invariably think the price exorbitant.

The following price list will be a guide to those who desire to figure their own shade bill. While the price of window shades fluctuates somewhat, this list will be a fair estimate in the United States. The prices here given are figures on shades including the best rollers and hand-made opaque cloth, and include all solid colors except red and black, as these would have to be made special and would require a separate price, which can be had at any store that includes this department.

HAND-MADE OPAQUE SHADE LIST Excepting All Reds

_	WIDTH	38"	42''	45"	48"	54"	63"	72"
Finished	4 feet	.50	.80	.85	.95	1.10	1.40	1.90
<u>:</u>	5 feet	.60	.90	.95	1.05	1.25	1.60	2.10
-	6 feet	.65	1.00	1.05	1.20	1.40	1.80	2.35
When	7 feet	.75	1.10	1.15	1.30	1.55	2.00	2.60
₹	8 fcet	.80	1.20	1.25	1.45	1.70	2.20	2.85
Shade	9 feet	.85	1.30	1.45	1.65	1.95	2.50	3.20
S	10 feet	1.00	1.45	1.60	1.75	2.10	2.70	3.45
70	11 feet	1.10	1.60	1.70	1.90	2.25	2.90	3.70
Length	12 feet	1.20	1.75	1.85	2.10	2.50	3.20	4.00
8	13 feet	1.50	1.95	2.05	2.30	2.95	3.50	4.45
ا ا	14 feet	1.60	2.10	2.20	2.40	3.10	3.70	4.70
	15 feet	1.70	2.25	2.35	2.70	3.35	4.00	5.10

To figure the price of a window shade from the above list, find at the top of the list the width of the shade needed, and run down this column to the line on which is the length in left column, thus finding the list price. For example: find the price of a shade forty-six inches wide and seven feet six inches long. As the forty-six-inch is not represented in the width at the top, take the next number higher, which is forty-eight inches. At the left, run down the first column for the length of the desired shade. To be accurate in figuring, it is well to take the next higher, which in this instance is eight feet. The price we find is \$1.45.

If the price on duplex shades is wanted, add about ten or fifteen per cent. to the price of the solid color shades.

Holland shades are about the same price as the duplex shades.

# 166 HOW TO BUY FURNITURE

To get the price of the water color shades, take half the price of this list. Water color shades over thirtyeight inches in width are usually not to be had.

# CHAPTER XIX

Oriental Rugs—No great attempt is made here to discuss the Oriental rug problem, as there are many books and histories which are very valuable to those who wish to familiarize themselves with this subject.

The history of the Oriental rug is something that has never been fathomed, particularly in regard to the original makers. History makes little difference to some people, at least, and to them an Oriental rug is an Oriental rug. They can not tell which are the best grades, or where they are made. They attend the auction sale of Oriental rug dealers and buy rugs under artificial lights, at almost any price, as these sales are usually hurried, and purchasers are forced to act quickly.

Of all gold brick schemes, the Oriental rug business is the foremost. These rugs have been sold all over the world; not because of their real value, but because of their fictitious history. The stock of two rugs may be very similar, but because one has an interesting story connected with it, it will bring four or five times as much as the one which has no story.

Classifications—Oriental rugs are divided into five classes—Turkish, Persian, Caucasian, Turkestan and Indian. Under each of these divisions come the various makes which are so-called because of the location

of the places where they are made, and consequently one must give this branch of home furnishings careful study before buying, and then it is important to purchase of some one who is reliable.

Pleasure Resort Purchases—Beware of Oriental rugs sold at pleasure resorts. If you want value received, it is not likely to be found there. In this connection it is well to relate just one instance that occurred while the writer was in the business. An acquaintance came in about Christmas time, bringing three mercerized couch covers of beautiful Oriental designs, size six by nine feet, and asked that they be sold for him. He was asked what he wanted for them, and he said he would sell the three for \$100, just what he paid for them. It developed that he had purchased these at a pleasure resort and thought he was getting genuine Oriental rugs, and didn't discover his mistake until some time later.

An inexperienced purchaser may be very easily taken in on a deal of this kind, especially when on a trip, where such things are found on sale. These couch covers, such as mentioned above, are made in this country and retail for \$15 or \$18 each. Novelties of any sort may bring fabulous prices anywhere, and especially at pleasure resorts, but it makes no difference what you find for sale at these places it is pretty safe to say that the asked price is not represented by quality.

Auction Sales—Good Oriental rugs are sent by collectors to this country in bales, each bale containing several good and several cheap ones. The bale is bought as a whole. The rugs are separated, and the best rugs sell for fancy prices, while the poorer grade rugs of the bale do not sell readily, consequently the "fake auction." This affords the quickest way of coming in contact with the inexperienced buyers, who think they are getting the real thing at a great bargain.

The auctioneer usually has a couple of men with him to help to take care of the rugs when shipping and repacking, etc., as Oriental rugs are very heavy and hard to handle. The rugs are usually shown under bright lights, which show them off to the best advantage. While the auction is in progress some of these helpers are used as fake bidders, and when a really valuable rug is offered at a ridiculously low price one of these fake bidders buys it in. If one were to attend these sales several days in succession one would, no doubt, find the same rug sold several different times. It is turned back each time to be sold again. The rugs that are bought by the bona fide buyers turn out to be cheap goods procured at fancy prices.

A Few Distinguishing Marks—The value of an Oriental rug depends on its age, on the quality of material used, on the richness of colors, and the number of knots to the square inch and the design on the face of the rug.

A real antique rug must be at least fifty years old, as modern rugs have no place in a collection, as far as value is concerned. Fifty years ago there were no ani-

line dyes, which are used so much in Oriental rug making at present. Colors of mineral origin and aniline colors make in the business a fine profit for the seller, and the purchaser gets inferior grades. Under artificial light it is hard to detect these dyes, and sometimes, in the very best light, these colors can be detected only by looking in the white part of the rugs, where colors sometimes run.

Vegetable dyes were used in early Oriental rug making, and this vegetable dye does not change its actual color, although it fades a little, while aniline dyes fade to different colors, sometimes one of the dyes that is used in a combination of colors entirely disappearing while others remain.

A rug dyed by vegetable dye will cost ten or fifteen times as much as if it were dyed with aniline dye.

A genuine Oriental rug shows its whole pattern and color in detail on the back. The pile is composed of rows of tied knots that can be detected by separating the pile. The sides have a narrow selvage or are overcast with colored wool, while the ends have either a selvage or fringe or both. Oriental rugs are much heavier than domestic rugs, and if compactly woven, by taking hold of the center and pulling it up the rug will stand cone-shape without falling. See that the knots of the pile are well tied. If the wool of the pile is of the same color, near the knot, but of a deeper shade than it is at the surface, it is no doubt a vegetable dye.

In the inferior rugs one can detect the counterfeit

by pulling out one of the threads, which will be found to be composed of two strands of cotton and one of wool, twisted together.

Consult an Expert—It takes an expert to detect the genuine imported vegetable dyed rugs from the American made, and imported aniline dyed rugs; therefore, the most economical way for the inexperienced to buy Oriental rugs is to pay a small fee to such a person to make the desired selections.

## CHAPTER XX

Fire Insurance—This is something that is, indeed, very important, although in most cases neglected, and especially so by the newly married, as insurance is something they least consider. Many a home, on which there was no insurance, has been burned out, leaving the occupants nothing with which to make a new start. For the slight expense incurred one can not afford to be without insurance.

An inventory booklet having blank pages for the listing of household furniture, wearing apparel, etc., and their value, can be obtained from almost any fire insurance agent. Carefully list with ink everything and its value. It is poor policy to exaggerate the value of these articles, as a fire settlement is made by adjusters paid to do nothing else, whose broad experience makes their judgment very keen as to values, and eliminates any chance of fraud on the part of the policy holder. Put the book with the insurance policy in a secure place, outside of the house if possible. It is advisable to have a duplicate at home in case one copy burns. If a fire occurs it will be the means of saving many dollars in adjusting a claim.

In the event of a fire, do not move a thing, or clean up the debris until settlement is made with the insurance company, as the insured usually loses by not adhering to this procedure. The writer had an experience of this very kind and left the burned things untouched for ten days or two weeks, and at a great inconvenience, before the adjuster called. After making the settlement the adjuster remarked that he paid the largest percentage of loss of his entire experience, and he had been in the adjusting business for many years. This satisfactory settlement was due to two facts—first, the things were left undisturbed, and second, there was an inventory of the goods in a safe outside of the house.

Insurance on Leased Goods—If good are purchased on a credit plan, and a lease or mortgage held on them by another party, one is expected to pay for those goods, and consequently should carry insurance as well as taxes upon them. If there should be no insurance upon them and they should burn the person having the goods would lose doubly, as the burning of the goods would not cancel the debt. When buying insurance, if goods are on a lease and not fully paid for, it isn't necessary to inform the insurance companies of that fact, as there may be trouble in getting a settlement after a fire, although the insurance companies are very willing to take the money each year as a premium, and do not seem concerned when the policy is written whether the goods are obtained on a lease or otherwise.

Understand Your Policy—A policy is seldom thoroughly understood until after a fire, or until time of final settlement. Then, to one's surprise, it is sometimes found that the policy does not cover as much as

expected, and that the insurance company is not as willing to settle in full as was presumed at the time the insurance was written. Insurance companies never pay a total loss, as they justly figure that, from usage, there is a certain depreciation in value.

When taking a policy, if not familiar with some of the terms, have them clearly explained. Keep a record of all insurance—when written, for how long, in what company or companies, and the time of its expiration. Do not let a minute slip by at time of expiration without renewing the policy, or having another to date from the same time, because that minute might be the time when a fire would occur.

Be sure to carry insurance, as the cost is trifling when it is realized that a fire of a few hours can leave one without a single possession.

Important Clauses—Notice what the policies say relative to "additional insurance," "removal of property" and "gasoline permit," as these are very important.

Standard Policy—The standard form of insurance policy most commonly used is that of the State of New York, although a great many of the States have their own standard forms, and these are the only ones permitted within those States, and vary slightly from the New York standard policy.

One should be sure to obtain a copy of the policy under which one is insured, and study it carefully, as the time consumed may be time well spent, as would be demonstrated if a fire should occur.

The following is an article taken from a mercantile

paper, and is well worth reading, as the responsibilities and obligations of the insured are just as important in a home as in a business enterprise.

The heading of this article is, "Some Facts About Your Insurance Policy. Responsibilities and Obligations of the Insured."

"It is probably no exaggeration to say that not one man in ten knows what a fire insurance policy really is.

"Nine men will say it is a promise by the insurance company to pay a certain agreed sum in case the insured property is damaged or destroyed by fire.

"The tenth man knows differently. He has read his policies. He knows that he must comply with certain conditions in order to make his policy good.

"He knows that if he fails to fulfil his part of the contract the insurance company can justly decline to pay his loss in case of a fire. Because—

"An insurance policy is merely a contract, binding on both parties. The company agrees to pay up to a certain amount in case of a fire, but only in consideration of the insured performing certain acts himself.

"It is quite important, then, that you read your policy. It is hedged about with technicalities, and imposes on you conditions which the courts have declared proper and legal. These conditions must be complied with, or the contract is at least voidable, if not void.

"There are at least seven vital points on which merchants should be informed with regard to fire insurance. They follow:

"I. Get Your Insurance Only Through a Record-

ing Agent-A 'recording agent' is one authorized to sign, issue and register policies. His acts bind the company. The acts or declarations of a mere solicitor do not bind the company. Therefore see that your policies are issued by a recording agent.

"2. See That Your Policies Provide for Other Concurrent Insurance—Every policy of standard form prohibits you from carrying other insurance than that specified in the policy, unless you are given express permission to do so. If you write more than one policy, be careful to see that all of them provide that other insurance may be carried; otherwise any loss you may sustain can be refused payment by the companies.

"3. Do You Understand the '80 Per Cent.' Clause?-This clause, for the use of which a reduced rate is given, means that you agree to carry insurance to the amount of at least 80 per cent, of the value of the stock. If you fail to do so, you are held to be your own insurer to the amount of the difference. As an ex-

ample:

"Suppose the value of your stock is \$10,000. Under the 80 per cent. clause you agree to carry at least \$8,000 insurance. Suppose you really have only \$5,000 insurance and suffer a \$5,000 loss. You are short \$3,000 in insurance, which is three-eighths of the amount you agreed to carry. Therefore, you must pay threeeighths of your own loss, and you can collect, not \$5,000, but only five-eighths of \$5,000, or \$3,125. If the 80 per cent. clause is in your policies, see that it is fully complied with.

"A. The 'Iron Safe' Clause-This provides that you must keep your books and your inventory in an iron safe at night. If it is in your policies, see that it is

complied with.

"5. The 'Three-Fourth Loss' Clause-If this clause is in your policies you can hold the companies only for three-fourths of whatever loss you may sustain. The object of this clause is to make you more careful in preventing a fire, by making you pay one-fourth of any loss you may sustain.

"6. Gasoline Lighting Systems-Be particular to see that you have a special permit in every policy to use such lights, if you have this system. Every standard policy absolutely prohibits the generation of gas for illuminating purposes on the premises covered by the policy. Be equally careful with regard to the storage

of benzine, kerosene, gasoline, etc.

"7. Read Your Policies-Then Do as They Provide -Every provision of the standard fire insurance policy has been construed and upheld by the courts. Every word and every phrase in these policies has been the subject of some law suit. They have been declared reasonable and legal by the courts. They are no longer subject to dispute. Read your policies and see what you are required to do. Then do it. Otherwise you may be unable to collect for a loss.

"Finally-Don't Have a Fire-Remember that at least half of the fires are caused by carelessness. Be

careful. Keep your premises clean.

"It is said that no less than half of the fires are pre-

ventable. Most of them are caused by pure carelessness. And every time there is a fire anywhere you help pay for it. The insurance companies don't pay the loss—they merely equalize it.

"So, first of all, insure yourself against loss by fire, and then inform yourself on your contract, so you will be protected against the technicalities of the policy. Then help in the fight for better fire control."

Leases—There are several things every one should know regarding the leasing of rented property, and the following information will be of value in placing them in position to enter into such a contract more intelligently:

"Leases" are written or oral agreements, or contracts, for the letting or holding of property for a time, for a consideration called "rent."

The "landlord" is the one who leases the property to any other person called a "tenant" for a duration of "time," showing when the lease begins and when it ends. A lease gives no title to a piece of property, but gives the renter as much right as though he had full title to the property as long as his lease exists, or until it expires.

If there is no clause to prohibit it, a lease may be transferred to another party, although such a clause is usually embodied in the lease, which also gives the landlord a better chance to decide whether he desires his tenants or not.

The lease should cover in detail the parties interested, the consideration, and the property to be leased,

and all conditions as to who is to pay the water, heat and light rent, and any other special clauses, such as the subletting of property, showing of the property, and posting "to rent" signs, etc. If the tenant fails to pay rent or violates any part as set forth in the lease, the lease becomes void and the landlord has full right to get possession of the property.

Every lease should be made in duplicate, and all parties concerned have a copy, which binds the landlord as well as the tenant, providing clauses were inserted for the upkeep or repairing of the property in any way.

Property must be vacated by a tenant in as good shape as when leased, or he is liable for the damages; however, an allowance must be made for the wear and tear.

A tenant has a right to remove anything he has added to a house, providing he can do so without injury to the property.

If a landlord agrees to make improvements and fails to do so, the tenant, after making a demand for the carrying out of the agreement, may pay for the work and deduct it from the rent.

If the landlord desires the possession of a leased property at time of the expiration of the lease, he must give notice in writing, signed by himself or his lawful agent, and have it presented to the tenant at such time as the statute laws of that state require.

If a lease is in force, it does not require re-signing each year to make it valid, unless there is a specified agreement to the effect that it must be signed yearly.









RELATION BETWEEN WAVE LENGTH IN METERS, FREQUENCY IN KILOCYCLES, AND THE PRODUCT OF INDUCTANCE (IN MICROHENRIES) AND CAPACITY

(11)	Micro	farads)						
Meters	f in Kc.	$L{ imes}C$	Meters	f in Kc.	$L{ imes}C$	Meters	f in Kc.	$L{ imes}C$
1	300,000	0.0000003	450	667	0.0570	740	405	0.1541
2	150,000	0.0000111	460	652	0.0596	745	403	0.1562
$ar{3}$		0.0000018	470	639	0.0622	750	400	0.1583
4		0.0000045	480	625	0.0649	755	397	0.1604
5		0.0000057	490	612	0.0676	760	395	0.1626
6		0.0000101	500	600	0.0704	765	392	0.1647
7		0.0000138	505	594	0.0718	770	390	0.1669
8		0.0000180		588	0.0732	775	387	0.1690
9		0.0000228	515	583	0.0747	780	385	0.1712
10		0.0000282	520	577	0.0761	785	382	0.1734
20		0.0001129	525	572	0.0776	790	380	0.1756
30		0.0002530	530	566	0.0791	795	377	0.1779
40		0.0004500	535	561	0.0806	800	375	0.1801
50		0.0007040	540	556	0.0821	805	373 370	0.1824
60		0.0010140	545	551	0.0836	810		0.1847 0.1870
70 80		$\begin{bmatrix} 0.0013780 \\ 0.0018010 \end{bmatrix}$	550 555	546 541	$0.0852 \\ 0.0867$	815 820	368 366	0.1893
80 90		$0.0018010 \\ 0.0022800$	560	536	0.0883	825	364	0.1893
100			565	531	0.0899	830	361	$0.1910 \\ 0.1939$
110		$\begin{bmatrix} 0.00282 \\ 0.00341 \end{bmatrix}$	570	527	0.0399	835	359	0.1962
120		$0.00341 \\ 0.00405$	575	522	$0.0913 \\ 0.0931$	840	357	0.1986
130		0.00476	580	517	$0.0931 \\ 0.0947$	845	355	0.201
140		0.00552	585	513	0.0963	850	353	0.203
150		0.00633	590	509	0.0980	855	351	0.206
160		0.00721	595	504	0.0996	860	349	0.208
170		0.00813	600	500	0.1013	865	347	0.211
180		0.00912	605	496	0.1030	870	345	0.213
190		0.01015	610	492	0.1047	875	343	0.216
200		0.01126	615	488	0.1065	880	341	0.218
$\frac{210}{210}$		0.01241	620	484	0.1082	885	339	0.220
220		0.01362	625	480	0.1100	890	337	0.223
230	1,304	0.01489	630	476	0.1117	895	335	0.225
240		0.01621	635	472	0.1135	900	333	0.228
250	1,200	0.01759	640	469	0.1153	905	331	0.231
260		0.01903	645	465	0.1171	910	330	$0.233 \\ 0.236$
270		0.0205	650	462	0.1189	915	328	0.236
280		0.0221	655	458	0.1208	920	326	0.238
290		[0.0237]	660	455	0.1226	925	324	0.241
300		0.0253	665	451	0.1245	930	323	0.243
310		0.0270	670	448	0.1264	935	321	$\begin{array}{c} 0.246 \\ 0.249 \end{array}$
320		0.0288	675	444	0.1283	940	319	$0.249 \\ 0.251$
330		0.0306	680	441	0.1302	945	$\begin{bmatrix} 317 \\ 316 \end{bmatrix}$	$0.251 \\ 0.254$
340		0.0325	685	438	0.1321	950 955	314	$0.254 \\ 0.257$
350		0.0345	690	435	0.1340	960	313	0.257
$\frac{360}{270}$		0.0365	695	432 429	$0.1360 \\ 0.1379$	965	311	$0.259 \\ 0.262$
$\frac{370}{380}$		$0.0385 \\ 0.0406$	700 705	$\frac{429}{426}$	0.1379 $0.1399$	970	309	$0.262 \\ 0.265$
390		0.0408	710	423	0.1399	975	308	0.268
990	1 759	0.0420	710	420	0.1419	000	206	0.200

0.1439

0.1459

0.1479

0.1500

0.1521

750 0.0450

732 0.0473

715 0.0496

698 0.0520

682 0.0545

 $\begin{array}{c} 0.270 \\ 0.273 \end{array}$ 

 $\begin{array}{c} 0.276 \\ 0.279 \end{array}$ 

# SKIP-DISTANCE AND RANGE TABLE

(For Frequencies between 1500 and 30,000 kc.)

Number   N			a s	Skip Distance	for K	adio Bi	roadeast by L. C. roung, Maximum Reliable Range	t by L.	C. ron	ange	Skip Distance Maximum Reliable Kange Services	
Day   Night   Day	34.	og of ound	Sum	mer	Win	<u></u>	Sumn	ner	Wint	e	(International Radiotelegraph Convention)	Remarks
100   100   150   150   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100	<u>-</u>	/ave	Day	Night	Day	Night	_		_	Night		
120   125   170   150   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170   170	1	001		:		:	100	100	150	300	Mobile	1604 Experimental—1600–1652–1664– 1680–1704–1712 Portable.
10	175-150 150-133 150-133 103-109 105-85 105-85 75-64	850 850 850 850 850 850 850					021120 021120 000 000 000 000 000 000	175 250 350 500 500 1500 4000 4000	22200 22200 33000 5000 6000 6000	600 750 1500 2500 3000 4500 7000 8000		U. S. Entitely Amateur. 10. S. Bords Log 300 Exp. Visual Broadcasting. 2398 Experimentary. Visual Broadcast. 2750 to 2950 Exp. Visual Broadcast. 3088 Experimental. 11. S. Entitely Amateur. 14795 Experimental.
10   220   115   455   770   530   130   530   130   530   130   530   130   530   130   530   130   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530   530		45000 500000	: : : : :	20 115 185	3888	60 175 290 290	450 550 650 650	5000 5500 6500 7000	827288 828888 8888888888888888888888888	000000000000000000000000000000000000000	Fixed. Broadcast. Mobile. Fixed.	NOTES MOBILE: Ships and Coastal Stations,
200 545 270 741 1950 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000 1850 8000	-36.6 -35.6 -35.1	2222	065 156 156 156	2222 22023 27023	200 200 230	360 465 630	8888 8888 8888 8888 8888 8888 8888 8888 8888	000000000000000000000000000000000000000	1300	000000000000000000000000000000000000000	Amateurs. Flyed. Mobile—Flyed.	Aircraft, Raliroad Stock, etc. / ivxen: Pernanent stations handling point to point trafle. Skip Distance: Shortest distance be- skip Distance:
100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100   100	-31.6 -21.2 -27.2 -27.3	35% 5	0000 0000 0000 0000	45106	3220 3220 3220 3220 3220	247 240 000 000	200021	80000	1820 2140 2460	8000	Broadcast. Fixed. Mobile.	yond the ground wave at which continuing cation is possible, or the point where the sky wave first comes to earth. On certain frequencles and at certain seasons com-
370 1000 460 1240 1600 8000 3200 Noblec-Fixed. 420 1075 516 800 3200 Noblec-Fixed. 420 1075 516 1800 8000 3440 Noblec-Fixed. 440 1230 680 12200 4060 1800 1800 1800 1800 1800 1800 1800 1		2010	233.55 535.55 535.55		0044 0025 0005	1080 1120 1170	1300 1500 1550	0000 8000 8000	2200 3000 3000		Broadcast. Fixed. Fixed.	munication is possible within the skip dis- tance due to echoes and around-the-world signals.
4460 1230 645 72 72 72 72 72 72 72 72 72 72 72 72 72			250 50 50 50 50 50 50 50 50 50 50 50 50 5		460 485 510	1240	1600 1700 1800	8000	3440 3440 3660		MobileFixed.	The above table was obtained from the general average of a targe number of observations. For the night ranges given it
1770 6400 770 6400 7700 7700 7700 7700 77		33	440 640		545 580	LED	2200 2200 2200		4360 4360	,	Amateurs. Fixed.	assumed that the greater part of the path between the transmitting and receive
580 755 6 1 3500 5 6500 5 1 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 1000 7 10	385	ವಿವ ಜ	47.00 200 200 200 200 200 200 200 200 200		265	rec	3220	IUAG	2000	EŁNI	liked. Mobile.	Ing stations is in explores.  As the distances many discrepaneles may general averages many discrepaneles may
1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000	17.50-16.90	in in	688		740	ная	3500 4000 6000	taU .	6450 6450 6450	sU :	Mobile—Fixed. Broadcast.	be found in practice due to scasonal changes, sun spot activities, geographical
1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000   1000	6.85-14.00 4.00-13.90	ನಿನಿ	220 720 720		1050	TOV	900	TON	988	LON	Broadcast.	location, local Weather conditions, etc.
1000 % 1400 known known known	3.45-13.10 3.45-13.10 3.10-10.70	222	832		1200	:	7000 -un-		7000 -un		Mobile—Fixed.	Good only for few hours during daylight.
	10.70-10.00	10	1000		1400		known un- known		un- known		Amateurs.	





